

# THE LEHIGH VALLEY TRANSIT COMPANY'S ST. LOUIS CARS



HISTORY  
AND  
ROSTER





# THE LEHIGH VALLEY TRANSIT COMPANY'S ST. LOUIS CARS

## Editor

Randolph L. Kulp

## Associate Editors

Frederick E. Barber Charles W. Houser, Sr. Howard P. Sell John P. Scharle

## Contributors

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Frederick E. Barber, Allentown, Penna.  
Thomas P. Brown, Souderton, Penna.  
Richard S. Clover, Huntingdon Valley, Penna.  
Royden M. Clymer, Allentown, Penna.  
David H. Cope, Broomall, Penna.  
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James H. Richards, Holland, Penna.  
William J. Rugen, Richmond Hill, N. Y.  
John P. Scharle, New York, N. Y.  
E. Alfred Seibel, Croton-on-Hudson, N. Y.  
Howard P. Sell, Allentown, Penna.  
John Gibb Smith, Jr. Collection  
Richard H. Steinmetz, Camp Hill, Penna.  
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October, 1961

**Lehigh Valley Chapter**  
**National Railway Historical Society, Inc.**  
Allentown, Pennsylvania

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**Cover Photo** — St. Louis car No. 182 in Lansdale, July, 1909, enroute from Chestnut Hill to Nazareth with the Delaware Water Gap excursion limited. Royden M. Clymer served as motorman and Leidy Kline as conductor. Photo contributed by Royden M. Clymer.

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**Cover Designer** — William T. Coe

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*To HOWARD P. SELL,*

A faithful member, a capable officer, and an electric railway authority, the Lehigh Valley Chapter, National Railway Historical Society, Incorporated, humbly dedicates this history.

Appropriately the Lehigh Valley Transit Company's St. Louis cars have achieved the most esteemed position in Howard's fond recollections of electric traction operations in the Lehigh Valley area.

# PREFACE

Bulky deck roof street cars of the Lehigh Valley Transit Company, affectionately termed the "St. Looies" by company personnel and the public, plied their way along the city, suburban, and interurban routes for thirty-nine years before the 1938-1940 equipment modernization program reduced them to heaps of ash and twisted steel scrap. Few members of the generation who were conveyed in their deteriorating bodies during the 1930's, and who witnessed the ultimate demise, realized the magnificent project for which seventy-five cars had been originally built a generation before, in 1901 to be exact, by St. Louis Car Company, St. Louis, Missouri.

Albert L. Johnson, a transit genius, arrived in Allentown, Pennsylvania, from Cleveland, Ohio, in 1893, and in the short interval preceding his premature death in July, 1901, ambitiously planned a 250 mile electric interurban network radiating from Allentown to Philadelphia to New York and to towns surrounding Allentown. A study involving mid-western electric interurban cars produced plans and designs for cars deemed best suited to render convenient efficient service. Fate intervened before successful conclusion of the project and Mr. Johnson's successors, capable but cost conscious business men who lacked a progressive pioneer spirit, cancelled construction of the Philadelphia-New York section and announced a program which would have retained only fifteen St. Louis cars for Allentown-Philadelphia service and eliminated sixty. As events later proved transit officials sold thirty-eight St. Louis cars to other systems in the United States, and most of the thirty-seven cars retained survived as long as all but four of intended replacements acquired in succeeding years.

Before the Lehigh Valley Transit Company deleted its last St. Louis car entry from the equipment roster, the cars as a group had impressively served every route at on time or another in passenger and occasional utility service — a feat not equalled by any other type of LVT electric railway car or highway vehicle.

LVT's numerous rehabilitation and revision programs, representing both interior and exterior alterations, usually included several St. Louis cars. Inconsistent selection of cars for each renovation project eventually created the situation whereby most cars differed slightly from one another. Modifications were not always completed within a definite span of time; sometimes several years passed between the introduction and conclusion of a revision program. Often one program overlapped another.

Although official and complete Lehigh Valley Transit Company St. Louis car records are no longer available, the following sources supplied valuable information used in the text: remnant records of Lehigh Valley Traction Company and Lehigh Valley Transit Company; unofficial personal records methodically entered daily in sundry ledger books by Souderton Car barn shop foremen between 1916 and 1939; microfilmed newspaper pages in the library of Call-Chronicle Newspapers, Inc., Allentown; data accumulated in notebooks by railway historians and rail "buffs"; and facts and railway lore told by a host of friendly Lehigh Valley Transit Company motormen, conductors, and shop employees who relived events drawn from pleasant recollections deeply engraved in their memories. Throughout discussions LVT employees who had been associated with the St. Louis cars warmly referred to them as though they were reminiscing about an old friend.

Contributors of either information or photographs are listed alphabetically on the title page, and those who contributed photographs are credited once again beneath the item contributed. All contributions, co-operation, and encouragement, gestures are gratefully acknowledged by the editorial staff.

Several photographs of "boomer" St. Louis cars, after they had been sold to other electric railways, have been grouped as the final presentation of the booklet. Most railway enthusiasts will recognize the familiar "St. Looey" features among structural changes added by the new owners.

The Lehigh Valley Chapter, National Railway Historical Society, Incorporated, as its fifth and largest historical production, proudly places this complete history and roster of the Lehigh Valley Transit Company's most interesting cars on the lengthening shelf of recorded railway history. The editorial staff collectively witnessed every phase of the St. Louis cars' versatility during their operating years and without reservations or hesitation must, by using a familiar bromide, acclaim them as the "Incomparable St. Looies".

## Associate Editors

Frederick E. Barber  
Charles W. Houser, Sr.  
John P. Scharle  
Howard P. Sell

## Editor, LVT St. Louis Car History

Randolph L. Kulp  
602 St. John Street  
Allentown, Penna.

October 1, 1961



## THE LEHIGH VALLEY TRANSIT COMPANY'S ST. LOUIS CARS

### ALBERT L. JOHNSON'S ELECTRIC RAILWAY EMPIRE

Horse car transportation quietly and efficiently served Allentown citizens for nearly one-quarter of a century, but the advent of electric street car service in 1891 introduced a series of events which frequently shattered the phlegmatic atmosphere during the two ensuing years. Allentown and the Lehigh Valley area suddenly became the battleground for rival traction interests who fought each other for control of existing routes, construction privileges for new routes within the valley, and both approval and financial aid for projections linking Allentown with rural communities outside the valley. One group, although lacking solid financial support, daringly proposed a seemingly foolhardy plan to connect Allentown and Philadelphia with an electric street car route. Angry threats and accusations voiced loudly by rival groups inspired a local newspaperman to boldly headline his daily coverage of local electric street railway events with "It Is War". From the turmoil, verbal tirades, and legal battles emerged the victor, Albert L. Johnson, destined to be eastern Pennsylvania's most dynamic electric traction personality.

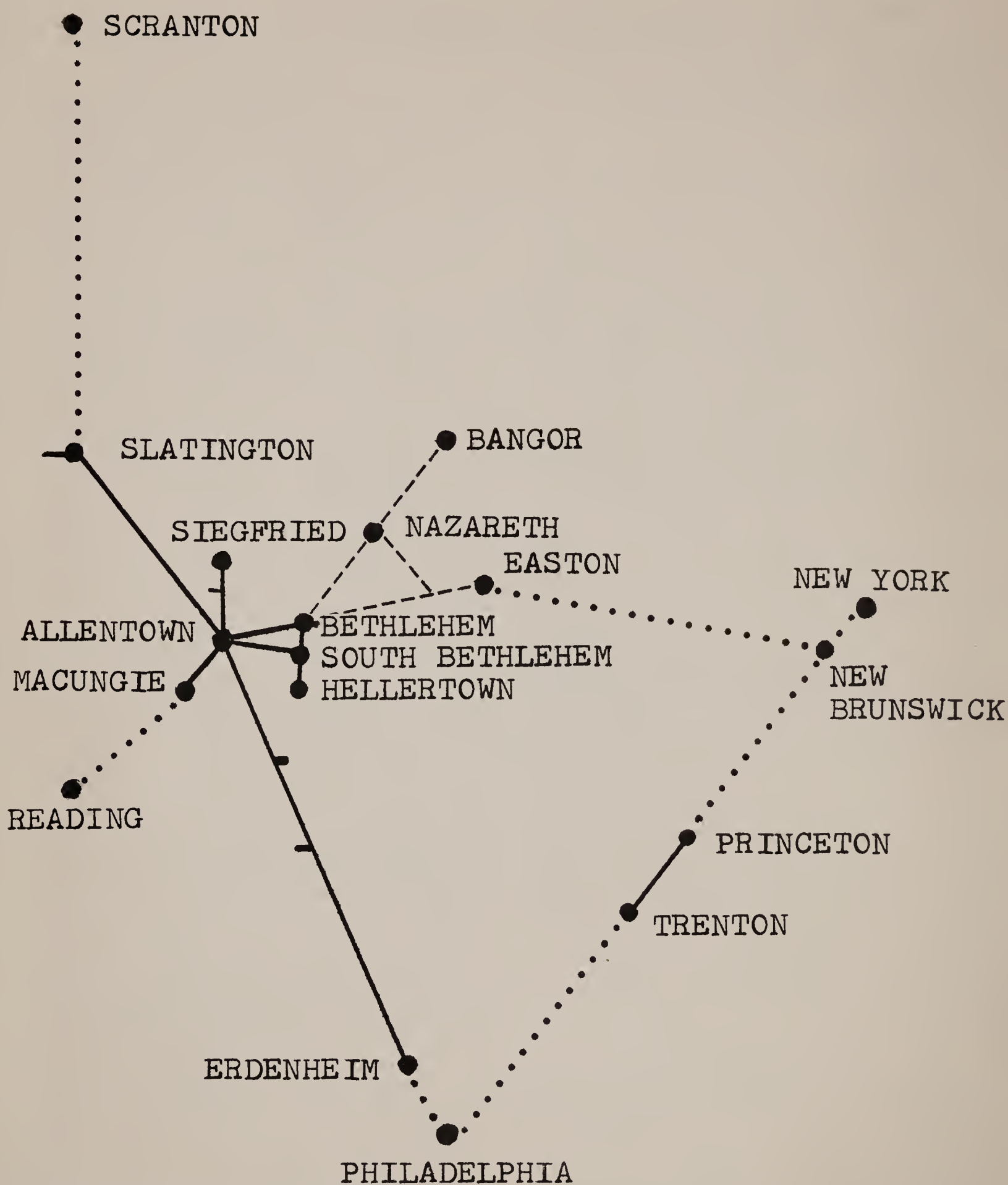
Mr. Johnson needed less than two years time to build his own system, eliminate potential competitors, and acquire control of an established electric railway. Shortly after his arrival in Allentown from Cleveland, Ohio, in early 1893 he organized the Allentown and Lehigh Valley Traction Company and planned a route from South Bethlehem through Allentown to Catasauqua. A&LVT inaugurated Allentown-West Catasauqua service on October 14, 1893, and South Bethlehem-Allentown service on January 22, 1894. On February 28, 1894, Mr. Johnson acquired controlling shares

of stock in the Allentown and Bethlehem Rapid Transit Company, operator of Allentown east-west and Allentown-Bethlehem electric railway service effective July 1, 1891, and Allentown-Catasauqua service shortly thereafter. His plans did not end with this acquisition. Johnson properties, operating as the Lehigh Valley Traction Company, organized November 17, 1899, reached South Bethlehem, Freemansburg, Hellertown, Macungie via Mountainville and Emaus (later Emmaus), Northampton and Siegfried via Catasauqua, Coplay and Egypt via Catasauqua, and Slatington either by new construction sponsored by the parent company or by individual companies privately financed. Slatington-Slatedale service opened in 1902.

Leased independent connecting traction companies expanded Mr. Johnson's control of Lehigh Valley area electric railways. The Bethlehem and Nazareth Street Railway, opened October 3, 1899, and the Easton Consolidated Electric Company, organized May 19, 1899, as operators of all Easton, Pennsylvania, and Phillipsburg, New Jersey, independent city and suburban traction companies, the Lafayette Traction Company, the oldest of the group having commenced operation on January 14, 1888, joined the Lehigh Valley Traction Company organization the same day, January 27, 1900. Slate Belt Electric Railway, opened November 14, 1900, and serving Nazareth, Belfast, Wind Gap, Pen Argyl and Bangor, concluded lease arrangements on December 1, 1900.

After all leases and legal maneuvers had been consummated, Mr. Johnson planned a co-ordinated system. His hurried inspection tours over Chicago, St. Louis, Indianapolis, and Milwaukee high speed electric railway systems established basic plans. A one and one-half million dollar allocation through loans provided funds for





Albert L. Johnson's Proposed Electric Railway Empire in 1901.

——— Lehigh Valley Traction Company owned routes.

- - - - - Lehigh Valley Traction Company leased routes.

. . . . . Routes proposed but never built by either Lehigh Valley Traction Company or successor

(Note — diagram not to scale)

trackage rehabilitation, new car purchases, operating standardization, and construction of an Allentown-Philadelphia-New York interurban route, a project which Mr. Johnson termed "My pet". The plan as originally conceived established Allentown as the hub of a two hundred and fifty mile overhead electric railway system radiating into several suburban and interurban routes served by new high speed heavy double truck cars. New large single truck cars, replacements for all older and smaller types, would have served urban areas and provided transfer arrangements with suburban and interurban routes.

Proposed plans later included Allentown-Reading, Allentown - Scranton, and Allentown-New York routes. The latter route would have been built eastward from Allentown to a connection with the Philadelphia - New York route at New Brunswick, New Jersey. Another plan would have provided a connection or transfer arrangement with the Delaware, Lackawanna, and Western Railroad (now Erie-Lackawanna Railroad) at Washington, New Jersey, and there also had been mention of electric third rail construction between Washington and Hoboken, New Jersey, to accommodate LVT interurban cars.

### **SEVENTY-FIVE ST. LOUIS CARS ORDERED**

Lehigh Valley Traction Company ordered thirty-five heavy double truck deck roof street railway cars Nos. 135 to 169 inclusive from St. Louis Car Company, St. Louis, Missouri, on January 10, 1901, for standard gauge routes from Allentown to Bethlehem, Easton, Bangor, Slatington, Siegfried, Hellertown, and Macungie and towns enroute, and forty cars Nos. 170 to 209 inclusive for wide, or Pennsylvania, gauge (5ft., 2½ in.) Philadelphia and New York Divisions on January 18, 1901. Lehigh Valley Traction Com-

pany revised the number arrangement to Nos. 137-171 and Nos. 172-211 after two small double truck cars obtained through the Slate Belt Electric Railway lease acquired Nos. 135 and 136 identifications.

Visually, despite a six inch difference in width, wide and standard gauge St. Louis cars appeared identical. Standard gauge cars measured eight feet, six inches wide; forty-five feet, six inches long; twelve feet high; and weighed 58,140 pounds. In comparison, wide gauge cars measured nine feet wide; forty-five feet, six inches long; twelve feet high, and weighed 61,400 pounds. Generally, physical features reflected Chicago City Railway Company and Milwaukee Electric Railway styles.

The price of each car, regardless of standard or wide gauge dimensions, had been established at \$3,000 delivered to Allentown. Motors, control system, and other vital electrical equipment purchased from other sources cost another estimated \$3,000, but LVT did not provide electrical equipment for every wide gauge car. St. Louis Car Company installed electrical equipment which LVT had purchased elsewhere. Delivery of cars had been promised by the builder beginning April 1, 1901.

Distinguishing exterior features included vertical wood sheathed sides and exposed steel side sill plates and steel sheet body ends; strong wooden posts; clerestory canvas covered wooden deck roof with twelve window-ventilators on each side and three windows on each end; one trolley pole hook on the top roof near each end; a metal chimney on the left side near the roof edge above the sixth window from the No. 2 end; a trolley rope and pole guard around the roof lip at both ends; small motorman steps on left front and right rear side body-vestibule partition post and corresponding wooden roof mats on lower and upper clerestory roof for

SPECIFICATIONS  
COVERING

*35 Motor Cars Drawn 10 1901*

FROM

**ST. LOUIS CAR COMPANY,**  
ST. LOUIS, MO.

All Contracts are contingent upon strikes,  
accidents and other acts of Providence.

Howard P. Sell Collection  
Lehigh Valley Traction Company and St. Louis Car Company contract for  
construction of thirty-five motor cars, dated January 10, 1901.



access to roof equipment; trolley board; two five foot drop platforms with two-section manual inward folding doors with divided windows on each side of both platforms; folding gates to replace doors for summer use (never used by LVT); a malleable iron hanger step with oak tread covered with Mason's safety tread at each entrance; hickory grab handles at each doorway; draw bar jaw and pin on top of both oak bumpers; bars underneath both platforms and hook brackets on both dashes to hold a Providence fender; a bracket on the dashes underneath the center window to hold a portable headlight; twelve drop sash windows on each side of the body with glass in the stationary upper and movable lower sections, the upper having a frosted design edging; an eight inch partition between the third and fourth windows and ninth and tenth windows; window screens, fastened to holders on window posts, designed to protect passengers when the windows were opened; two large drop sash windows flanking a large immovable center window on each platform; destination sign hooks near ledge of the center window on each dash; and two St. Louis No. 23 trucks equipped with thirty-three inch wheels. The paint scheme included "Broadway" yellow body with cream trim from window sills to roof; cream striping; light brown stained window sashes and doors; large silver numbers outlined in black, but no lettering; tan roof; and black poles, bumpers, undercarriage, and trucks. LVT's shop installed Providence fenders after delivery.

Interior features included varnished elaborately panelled quarter-sawed white oak woodwork; double wood floor with grooves in the aisle area; four floor traps for motor inspection; Milwaukee pattern coal stove and pipe near left side center from the No. 2 end; twenty-six double rattan

St. Louis walkover seats with foot rests and bronze handles (only twenty-five seats when stove installed during wintertime); hinged window ledge with brass button handle on top of wooden pocket into which lower window sash slid when opened; Pantasote shades at each window; passenger signal buttons at each side window post; full length advertising card rack above side windows; three-ply one-quarter inch sawed white oak wood veneer ceiling; one St. Louis round dial register on each bulkhead with a continuing rod with levers under each clerestory side; holding straps, for standees, fastened to clerestory sides; conductor's signal cord, fastened to hangers above the aisle, extended along the full car length through both bulkheads to a clapper bell fastened to each platform ceiling; and quartered oak vestibule partitions under bulkheads with bevelled edge mirrors above windows, with shades, and two sliding vestibule doors, with windows, roll curtains, and imposing bronze handles, slid into partitions as a gear mechanism opened opposite door as the other door opened manually. "The St. Louis Car Company, St. Louis, Missouri" appeared in silver paint on the inner side of each bulkhead. All metal hardware was bronze.

Electrical and mechanical equipment were properly located throughout the car. On each platform were a WH K14 controller to the left of center window; a Christensen air brake valve directly opposite center window; a St. Louis Car Company patented bevel gear malleable iron ratchet hand brake wheel located to the right of brake valve; an overhead circuit breaker and air compressor control switch; an air gauge on the post separating center and left end windows; switch bar holder; and five inch chime foot whistle and fourteen inch foot gong, activated by movable pins, underneath each platform near





John P. Scharle Collection

Builder's photograph of Lehigh Valley Traction Company No. 146. The photograph appeared in sundry electric railway journals during 1901. Broadway yellow body and cream window sashes constituted the main color scheme.



Elwood C. McElroy Collection

St. Louis cars partially submerged by flood waters inside the Lehigh Valley Traction Company's South Allentown Car barn after the Little Lehigh River overflowed its banks, March, 1902.



the controls. Four Westinghouse No. 56 motors developed fifty-five horsepower and thirty-five miles per hour maximum speed. Roof equipment included two long trolley poles with four inch wheels, a Nuttal tandem spring base, and a cable leading from each trolley base through bulkheads to the switch. The portable arc headlight, set in holders on the dash beneath the center window, plugged into a receptacle on the lower left dash near the bumper. An Adlake oil marker lamp fitted into a dash-socket located above the headlight receptacle, and a portable type Wilson trolley catcher, fastened on the dash beneath the right window, controlled the rope. Interior lighting fixtures fastened to the ceiling included two chandeliers with five lamps, near center; two chandeliers with four lamps, near each bulkhead; and two lamps on platform ceiling. Air compressor and reservoirs, switch group, cables, resistors, fuse box, re-railers, jack and handle, line switch, reverser, tie rods, and brake equipment were attached to the floor's underside. The automatic air pressure governor was located inside the car body near center underneath a seat. Two sand boxes under each platform near the vestibule partition, filled at vestibule floor level, sprayed sand on both rails in front of the truck at the motorman's position when activated by a manual lever located left of the control.

Motormen nicknamed the WH K14 control the "typewriter". Movement from one of its thirteen points to another could only be properly accomplished by inserting a thumb release pin protruding from the control handle. Quick thumb movement by the motorman as he moved the control from one point to another had been compared to a stenographer's dexterity while operating a typewriter.

## PHILADELPHIA AND NEW YORK DIVISIONS

The Allentown-Philadelphia route assumed physical form on February 15, 1901, when the wide gauge Inland Traction Company, operator of Perkasio-North Wales service effective April 23, 1900, and the organized but non-operating Allentown and Coopersburg Street Railway merged and formed the Philadelphia and Lehigh Valley Traction Company. Lehigh Valley Traction Company controlled the new organization.

Philadelphia-New York route plans progressed more slowly than Allentown-Philadelphia plans although Mr. Johnson had consulted many New York and New Jersey public officials; acquired operating agreements with several independent street railway lines in New Jersey and Pennsylvania; acquired sundry right of way tracts in New Jersey; purchased a bridge across the Delaware River from Trenton, New Jersey, to Morrisville, Pennsylvania; and surveyed a route between Philadelphia and Bristol. Plans included either the construction of tunnels or erection of bridges over New York Bay via Staten Island and East River via Brooklyn so that Mr. Johnson's cars could operate on Broadway into the heart of New York City. Terminus in Philadelphia for both Philadelphia and New York Divisions had been planned at city hall square. Enthusiastically, yet prematurely, Mr. Johnson set November 1, 1901, as inauguration date of service between Allentown, Philadelphia, and New York.

Mr. Johnson obtained the Philadelphia, Trenton, and New York Railroad charter on April 4th, and on April 20th, all stock of the Trenton, Lawrenceville, and Princeton Railroad, a steam railroad predominantly a freight line which interchanged freight cars with the Philadelphia and Read-





Elwood C. McElroy Collection

Shop crew and Allentown bound No. 144 pose on the crest of Gauffs Hill, Salisbury Township, along the Allentown-South Bethlehem route, 1902.



Randolph L. Kulp Collection

No. 142 ascending Main Street Hill, Slatington, enroute to Allentown, 1902.



ing Railway at Trenton, New Jersey. This section of trackage, after electrification, had been planned as the nucleus for the Philadelphia-New York route.

Realizing a potential lucrative income source by handling standard gauge railroad freight cars along the Philadelphia-New York route and expecting state legislation which would permit construction of his own route through Philadelphia streets instead of using wide gauge trackage of existing systems, Mr. Johnson cancelled wide gauge track plans for both the Philadelphia and New York Divisions and adopted standard gauge dimensions for all routes. Simultaneously St. Louis Car Company received an authorization which changed truck installations of Nos. 172 to 211 from wide to standard gauge, but body dimensions remained unaltered.

Improvements to local and suburban routes continued despite the concerted effort toward a rapid and successful conclusion of the gigantic Philadelphia and New York Division projects. Northampton Central Division, a trackage link which eliminated entrance into Bethlehem and provided a route for direct Easton-Nazareth service, opened on March 20, 1901, from Nazareth to Nazareth Junction, later renamed Country Club Junction, midway on the Easton-Bethlehem route, or officially, Easton, Palmer, and Bethlehem Street Railway. Easton Consolidated Electric Company controlled EP&B by a lease.

During June, 1901, material and supplies for construction of standard gauge North Wales - Philadelphia trackage arrived in Ambler. As planned, construction crews commenced work north from Ambler toward North Wales and southward toward Chestnut Hill along a route which Inland Traction Company had surveyed during 1900.

## ST. LOUIS CARS ARRIVE

St. Louis cars first arrived in Allentown on flat cars via Lehigh Valley Railroad from Buffalo, New York, on May 29, 1901. Lehigh Valley Traction Company maintenance crews unloaded all cars at Riverside Yard and either towed those without motors installed or operated those fully equipped to storage under cover at carbarns in Hecktown, Butztown, Rittersville, and South Allentown, and to open air storage in a long siding near Fullerton on the eastern Allentown-Catasauqua route. Mr. Johnson, planning to publicly present all seventy-five cars with inauguration of Philadelphia and New York Divisions' services, placed the cars in storage until the historic moment. Watchmen stationed in one car prevented damage by vandalism to cars stored outdoors near Fullerton.

According to a June 14, 1901, newspaper account, Lehigh Valley Traction Company returned to St. Louis Car Company three unidentified cars which had received roof or vestibule damage in a wreck on the Lehigh Valley Railroad north of Mauch Chunk (later Jim Thorpe). Incomplete 1901 shop records of South Allentown Carbarn report repairs to Nos. 148, 150, 176, 179, 184, 186, 193, 204, and 206, all damaged slightly in subsequent shipments. Veteran shop workers recall damaged unused St. Louis cars stored in Rittersville Carbarn.

While St. Louis cars arrived in Allentown from the builder during late spring, 1901, Philadelphia and New York Divisions' opposition organized. The Philadelphia and Reading Railway (later Reading Company), aware that the planned electric railway would compete in local passenger service along the Bethlehem, or North Penn, Branch, disallowed a physical crossing of their Plymouth





John P. Scharle Collection

No. 144 and crew, enroute to Allentown, pose for publicity photograph at the west end of the old Broad Street Bridge, 1903. The structure spanned Monocacy Creek valley between Bethlehem and West Bethlehem.



Randolph L. Kulp Collection

Allentown bound No. 164 operating on Broad Street west of New Street, Bethlehem, 1903.



Branch at Flourtown. Through grants to P&LVT's predecessors and to a company which P&LVT had hoped to purchase, and by means of public roads and bridges, P&LVT either underpassed or overpassed or would underpass and overpass the Philadelphia and Reading Railway's Bethlehem Branch at Perkasio, Souderton, North Wales, and Fort Washington and the Stony Creek Branch at a point south of Lansdale. Another probable underpass would have involved the Trenton Branch well within Philadelphia's boundaries. The Pennsylvania Railroad, visioning the Philadelphia-New York section as a competitor in both freight and passenger services, attempted to prevent P&LVT's entrance into Philadelphia by energetically opposing the underpassing of their main line freight trackage bridging Bethlehem Pike at Whitemarsh. Philadelphia traction interests objected to the intrusion of a non-Philadelphia organization by claiming prior rights to all new street railway franchises within Philadelphia as well as the purchase of existing companies.

Steam railroads objected to identical services, particularly freight, promised by the proposed Philadelphia-New York electric route because different laws governed each type of railway. According to the railroad spokesmen, unfair competition practices would compel the steam railroads to cease operations.

### **ALBERT L. JOHNSON DIES**

Albert L. Johnson's premature death on July 2, 1901, removed from electric railway activity the traction empire's most devoted and vigorous proponent and presaged the system's ultimate collapse. Close associates, aware of Mr. Johnson's unusual forceful ability and ingenuity, believed that if he had lived he would have guided his project to a successful conclusion. Tom L. Johnson, mayor of

Cleveland, Ohio, and Albert's brother, years later remarked that Albert had sacrificed his life establishing his electric railway organization.

Mr. Robert E. Wright, an Allentown attorney accepting the Lehigh Valley Traction Company presidency, immediately investigated the company's financial structure. After his study had been completed, he cancelled the Philadelphia-New York project but approved completion of the Allentown-Philadelphia route.

On August 22, 1901, P&LVT commenced construction of Allentown-Coopersburg trackage northward from Coopersburg. This location for initial trackage construction plus the earlier purchase of the turnpike had been purposely arranged to prevent rival traction organizations, Quakertown Traction Company being the foremost, from obtaining the most suitable route into Allentown over Lehigh Mountain via the low point at Summit Lawn.

Philadelphia and Lehigh Valley Traction Company, after a controversy which at one time threatened either legal action or construction of a paralleling route, moved a step closer to completion on September 5, 1901, by leasing the wide gauge Quakertown Traction Company, an independent system opened on June 11, 1898, from Richlandtown to Quakertown and by 1900 to Perkasio. During late autumn, 1901, the physical connection between former Inland Traction Company and Quakertown Traction Company trackage in Perkasio permitted continuous Philadelphia and Lehigh Valley Traction Company service with QT and IT single truck and small double truck wide gauge cars from Richlandtown to North Wales through Quakertown, Perkasio, Sellersville, Telford, Souderton, Hatfield, and Lansdale.

All St. Louis cars remained in storage while Lehigh Valley Traction Company and leased Easton Consolidated Electric Company single truck





Howard P. Sell Collection

No. 184 and crew pose at Souderton Carbarn, 1903. The Providence fender conveniently provided advertising facilities.



Henry L. Wismer Postcard Collection

No. 181, operating Philadelphia and Lehigh Valley Traction Company limited service, halted at Perkasio Park entrance along original Quakertown Traction Company trackage, circa 1903.



cars inaugurated and operated Philadelphia and Lehigh Valley Traction Company's Allentown - Coopersburg service effective December 19, 1901. P&LVT trackage branched from LVT's Emaus-Macungie route at Philadelphia Junction, later Emaus Junction, in Mountainville at the northern foot of Lehigh, or South, Mountain. Track construction groups continued work on the projection southward from Coopersburg to a junction with former Quakertown Traction Company trackage at Quakertown's northern boundary.

Lehigh Valley Traction Company transferred and shipped, presumably from Rittersville Carban storage, St. Louis cars Nos. 209, 210, and 211 to Trenton, Lawrenceville, and Princeton Railroad on November 9, 1901. The New Jersey company, a completely electrified ten mile segment of the proposed New York Division, had concluded preparation to inaugurate twenty minute passenger service between Trenton's business section and Princeton University campus. Later, in December, 1902, Trenton, Lawrenceville, and Princeton Railroad's successor purchased LVT St. Louis car No. 187. Any hopes entertained for revival of Philadelphia-New York route construction as planned by A. L. Johnson disappeared finally and officially on July 12, 1902, when New Jersey and Pennsylvania Traction Company gained control of all A. L. Johnson electric railway properties in New Jersey.

More misfortune befell Lehigh Valley Traction Company on February 28, 1902. Lehigh River at flood stage caused the Little Lehigh River, a tributary, to overflow its banks and flood, among other buildings, the two-story South Allentown Carban located on its south bank in Salisbury Township east of the Allentown-Philadelphia highway, or Lehigh Street. Although employees desperately attempted to move all cars to

nearby higher ground, several cars, including unused St. Louis cars, remained in the carban and were submerged almost as far as the roof base. Employees managed to move one St. Louis car approximately one car length from the carban onto Lehigh Street before muddy water covered the motors and prevented further operation. After the river returned to its channel, maintenance workers commenced the reconditioning of cars involved.

### ST. LOUIS CARS ENTER SERVICE

Completion of Coopersburg-Quakertown trackage on March 3, 1902, and introduction of Allentown-Quakertown service brought assignments to the St. Louis cars setting in storage for almost one year. A heavy snow fall on March 6, 1902, delayed the debut, but on March 11, after the route had been cleared, St. Louis cars inaugurated a one hour and fifteen minute schedule between the 6th and Hamilton Streets terminus in Allentown and the northern end of Quakertown. Passengers requiring transportation to or from points between Quakertown and North Wales travelled on former Inland Traction Company and Quakertown Traction Company wide gauge single and small double truck cars which met St. Louis cars in Quakertown at Red Lion Junction, the meeting point of standard and wide gauge tracks. Remnant shop records list St. Louis cars Nos. 139, 168, 180, 182, and 183 as maintaining P&LVT standard gauge schedules during early months of operation. St. Louis cars also commenced service on routes from Allentown to Slatington, Siegfried, Easton, Macungie via Emaus, Bethlehem, South Bethlehem, Hellertown, and Nazareth shortly after establishment of Allentown-Quakertown service. St. Louis cars operated into Easton as far as 6th and Northampton Streets, the terminus of Easton, Palmer, and Bethlehem Street





**Henry L. Wismer Postcard Collection**

Unidentified St. Louis car southbound in Sellersville on former Inland Traction Company trackage, circa 1903.



**Howard P. Sell Collection**

Shop crew member poses with No. 173 along track leading from main line to Souderton Carbarn, circa 1903. Another St. Louis car is barely visible on the main line in the background.



Railway's standard gauge track. All other systems controlled by Easton Consolidated Electric Company had been wide gauge at that time.

Introduction of Allentown-Quakertown service also instituted conversion of P&LVT wide gauge track to standard gauge dimensions between Richlandtown and North Wales and spurred completion of North Wales-Erdenheim standard gauge trackage construction. However, opposition from competitors delayed the latter project and nearly destroyed the entire electric railway system.

Court action which further solidified prior rights claims held by older Philadelphia traction interests eliminated P&LVT's hopes of ever laying track within Philadelphia's city limits. To further delay the project, through a calculating error, steel beams and girders for P&LVT's bridge over the Philadelphia and Reading Railway at North Wales had been fabricated ten feet too short.

Despite moderate objections voiced by a few local governing bodies, track crews quickly converted wide gauge trackage to standard gauge dimensions southward from Red Lion Junction, Quakertown. While work progressed, St. Louis cars operated from Allentown only as far as conversion had been completed and met wide gauge cars operating northward from North Wales. Each trip passengers changed from one car to another at a different location. St. Louis cars operated to a point beyond Quakertown, April 9; Rocky Ridge, April 16; Sellersville, April 30; Telford, May 10; Souderton, May 13; Hatfield, May 16; Lansdale, May 21; and North Wales, May 28, 1902. As wide gauge track mileage decreased, shop crews changed wide gauge cars' truck dimensions to standard gauge along the right of way, in Souderton Car barn, and finally, the last car at the bridge over Philadelphia and Reading Railway in North Wales.

Semi-completion of standard gauge track construction from North Wales to Wheel Pump House in Erdenheim on June 5, 1902, permitted establishment of interrupted St. Louis car service between Allentown and Chestnut Hill. Officially Philadelphia and Lehigh Valley Traction Company trackage terminated in Erdenheim at Philadelphia's boundary, but P&LVT and its successor referred to the terminus as either Philadelphia or Chestnut Hill.

St. Louis cars, shipped on railroad cars from Allentown to Flourtown and Ambler, served North Wales-Whitemarsh, Whitemarsh-Flourtown, and Flourtown-Erdenheim (Chestnut Hill) trackage sections. LVT shop records list Nos. 171 and 177 as having been shipped to Ambler and Nos. 172 and 179 as serving North Wales-Whitemarsh section. Passengers patronizing the separated service walked the distance from one car to another or, at North Wales, entered a horse drawn carriage provided by P&LVT. Flour dust dispersed by the Flourtown grist mill, much to the amusement of crews and town folks, whitened the Flourtown-Chestnut Hill St. Louis car almost beyond recognition. The car normally waited near the busy mill for the connecting St. Louis car.

Judge Wieand of Montgomery County court handed down an opinion on July 17, 1902, which informed The Pennsylvania Railroad that it could not prevent P&LVT's track construction under their overpass at Whitemarsh. The long sought victory endured briefly. On July 28, 1902, The Pennsylvania Railroad filed injunctions which restrained P&LVT from proceeding with construction plans, and the court complied until arguments had been heard. After the court dismissed the injunctions, September 9, 1902, P&LVT laid track under PRR's Whitemarsh overpass and connected North Wales-Whitemarsh and Whitemarsh-Flourtown sections. Completion of the bridge over Philadelphia and





Howard P. Sell Collection

Shop crew member and carbarn pet pose with No. 173 at Souderton Carbarn, circa, 1903.



Elwood C. McElroy Collection

Lehigh Valley Traction Company St. Louis car No. 198 being loaded at Riverside Yard, Allentown, for shipment to Citizens Electric and Gas Company (location unknown), March, 1903.



Reading Railway at North Wales on November 23, 1902, left only the Flourtown surface crossing arrangement unsettled. Either in late April or early May, 1903, P&LVT, rather than construct a proposed expensive underpass west of the crossing, dispatched a track crew to the scene at night and "stole the crossing" by installing crossover trackage without P&R's knowledge or consent and operating a St. Louis car over it before witnesses. After the car's operation through the crossover was properly witnessed, the railroad could not legally remove P&LVT's crossover trackage. This strategic action by P&LVT established, more than one and one-half years behind anticipated schedule, continuous Allentown-Chestnut Hill service with St. Louis cars.

P&LVT offered and maintained accelerated service as originally planned, but St. Louis cars operating at maximum speed dangerously negotiated numerous short radius curves engineered for single truck and short wheel base double truck cars. Two less serious accidents preceded the upset at Hatfield on November 27, 1902. In the latter accident forty passengers suffered injuries. Although track crews had already begun to revise and relocate several curves, trackage between Lansdale and Perkasie received immediate attention.

## **TWENTY-NINE ST. LOUIS CARS SOLD**

Cancellation of more than one-half of A. L. Johnson's proposed interurban system provided, according to official decision, more high speed heavy St. Louis cars than could be economically assigned to existing routes. Lehigh Valley Traction Company deemed the sale of excess cars a convenient method either to recover part of invested funds or decrease the debt. Broker's advertisements in sundry 1902 issues of electric railway periodicals offered eighteen Broadway yellow motorless

unlettered but numbered LVT double truck St. Louis cars for sale. Subsequently Lehigh Valley Traction Company sold twenty-nine cars, twenty-one wide and eight standard gauge types, to various systems in the United States: cars Nos. 205, 206, 207, and 208 to Fonda, Johnstown, and Gloversville Railroad Company, New York, October 31, 1902; No. 198 to Citizens Electric and Gas Company, Iowa (?), March 31, 1903; Nos. 188, 195, 196, and 200 to Fonda, Johnstown, and Gloversville Railroad Company, New York, June 6, 1903; Nos. 189 and 194 to Danville Street Railway and Light Company, Illinois, September 30, 1903; Nos. 190, 191, 192, 193, 197, 199, 201, 202, 203, and 204, March 21, 1904, and Nos. 139, 141, 148, 152, 155, 157, 160, and 163, April 16, 1904, to Oakland Transit Consolidated, California. Cars Nos. 187 to 211 inclusive never operated revenue service over LVT or P&LVT trackage, but several of the Nos. 137 to 171 group sold to other companies are known to have operated assignments.

The ten wide gauge dimension cars shipped to Oakland Transit Consolidated had been stored in Hecktown Car barn, six standard gauge cars in Butztown Car barn, and two standard gauge cars in South Allentown Car barn. Shipment proceedings from Allentown did not pass without incident. Car No. 147 suffered roof damage from a fire which suddenly flared during the descent of Hamilton Street hill while enroute to Riverside Yard for shipment. LVT substituted another unidentified car, and, after repairs, No. 147 remained on LVT's roster for thirty-one years.

## **A. L. JOHNSON'S PROPERTIES IN RECEIVERSHIP**

Lehigh Valley Traction and Philadelphia and Lehigh Valley Traction Companies' weak financial status im-





Randolph L. Kulp Collection

Chestnut Hill bound St. Louis car and No. 113, a former small double truck Duplex car of the Inland Traction Company, meeting at Red Lion Junction, Quakertown, circa 1904. No. 113 maintained the Quakertown-Richlandtown schedule.



Charles W. Houser, Sr., Collection

No. 183 setting at Menlo Park, Perkasio, circa, 1904.



proved little during the second year following A. L. Johnson's death. In lieu of cash rental due Easton Consolidated Electric Company on April 1, 1903, Lehigh Valley Traction Company transferred St. Louis cars Nos. 145, 167, 168, and 171 to the latter's roster. One month later, on May 1, 1903, LVT's finance officer paid interest due Bethlehem and Nazareth Street Railway Company but defaulted payment due on Philadelphia and Lehigh Valley Traction Company bonds. Consequently, on May 3, 1903, only a few days after continuous Allentown-Chestnut Hill service had been established, the Albert L. Johnson Estate, fearing loss of the entire investment, applied for receivers in the United States District Court in Philadelphia. LVT and P&LVT executives blamed, in addition to the delay of Philadelphia route completion, the purchase of the St. Louis cars for adverse financial conditions and predicted their replacement with lighter types on all routes except P&LVT. Power supply had also become a cost factor. Small individual 600 volt DC steam plants together with inadequate cables feeding long distances could not satisfactorily supply current required by St. Louis cars.

Timetables issued May 16, 1903, listed daily hourly three-hour Allentown-Chestnut Hill schedules from 6:00 a.m. to 11:00 p.m. At Chestnut Hill passengers travelling to Philadelphia's business district either patronized a nearby Union Traction Company (Philadelphia Rapid Transit Company) surface car route or walked eight-tenths of one mile to the Philadelphia and Reading Railway station or one and one-tenth miles to The Pennsylvania Railroad suburban station. Combined P&LVT and PRT service, consuming four and one-half hours, received the most patronage. PRT's fare from Chestnut Hill to Philadelphia's business center cost only five cents. It soon became a fad for Lehigh

Valley folk to travel to Philadelphia via electric car, enjoy a noon meal, shop in well stocked department stores, dine in one of the better restaurants, and return home before midnight via the same railway service.

St. Louis cars operating at high speeds along the dirt covered turnpike between Erdenheim and Springhouse raised dust, especially during summer months, much to the discomfort of passengers, highway travellers, and residents along the route. Effective July 20, 1903, No. 500, a 2,500 gallon capacity sprinkler car, operated along the eight mile trackage bordering Bethlehem Pike and wetted loose dirt lying between the rails and adjacent to the right of way. A pump permitted the drawing of water from creeks or streams near the track.

Tom L. Johnson, William F. Harrity, George H. Frazier, Edward B. Smith, and Harry C. Trexler, reorganization committee members appointed by the district courts following the receivership application, toured LVT's Slatington Division on July 29, 1903, in the single truck private car named "Electra". Strangely, even after subsequent trips over other routes, the committee members never publicly evaluated the system's potentialities but their consistent refusal to sell any or all properties to several interested buyers revealed an underlying favorable attitude. Several electric railway magnates who had indicated a desire to purchase properties announced, through daily newspaper items, plans which would have combined either or both LVT and P&LVT with Philadelphia systems or established both as the nucleus of a direct high speed electric railway network extending from Philadelphia to Scranton via Allentown.

St. Louis cars rather frequently became involved in sundry accidents: colliding with each other, ramming work or other passenger cars, upset-





Henry L. Wismer Postcard Collection

Allentown bound No. 173 setting on former Inland Traction Company right of way at Highland Park, near Derstines, south of Sellersville, 1905.



Charles W. Houser, Sr., Collection

Bethlehem bound No. 138 in Allentown showing the large L. V. T. Co. identification, 1905. Originally St. Louis cars had not been lettered.



ting on curves, striking horse-drawn teams, or crashing into railroad trains at crossings. Each time repair crews quickly repaired and out-shopped the damaged car. Car No. 159 recorded the shortest operating time span of all St. Louis cars retained by LVT and successor. The motorman operating Easton bound No. 159 from Nazareth under adverse fog conditions on September 1, 1903, entered Nazareth Junction on the Easton-Bethlehem route at a speed too fast to negotiate the sharp right angle curve. The car derailed, careened through a field, and rolled over. LVT, financially unable to perform repair work and already having excess cars, retired No. 159 to storage in the former Bethlehem and Nazareth Street Railway car barn at Hecktown village north of Bethlehem.

Gradually the receivership committee adopted several plans which A. L. Johnson had originated. On September 5, 1903, LVT introduced direct service with St. Louis cars from Allentown's 6th and Hamilton Streets terminus to Bangor via leased Slate Belt Electric Railway trackage between Nazareth and Bangor through Wind Gap and Pen Argyl. Car No. 170, experiencing some clearance difficulties, completed the first St. Louis car operation north of Nazareth.

Although heavy car high speed operation proved beneficial to most people, some suffered inconveniences. In December, 1903, a female florist sued P&LVT. According to her testimony vibrations caused by passing St. Louis cars shattered windows in the greenhouse. Cold air seeping through broken or cracked panes damaged many flowers and plants to that extent that business losses resulted. The proceedings ended in a non-suit.

Difficulties continually plagued LVT and P&LVT management. LVT's tottering railway organization shrank in size when it lost control of two leased

companies through rental payment default on March 1, 1904. Easton Consolidated Electric Company on May 2, 1904, regained control of its properties, including the Northampton Central Division, and fifty-five single truck cars and the four double truck St. Louis cars transferred to the roster by LVT the year before. Bethlehem Construction Company on May 4, 1904, regained the Slate Belt Electric Railway property and its two small double truck cars which had been transferred to LVT's roster in 1900. LVT owned St. Louis cars operating schedules from Easton, Palmer, and Bethlehem Street Railway's Butztown Car barn returned to Allentown. LVT's Nazareth-Bangor operations also ended with the Slate Belt Electric Railway lease termination.

One year after receivership proceedings had been filed the LVT and P&LVT reorganization committee engaged the services of Mr. Charles Dupont, general manager of St. Louis electric railways. After Mr. Dupont toured most routes with Mr. Tom L. Johnson and otherwise concluded his investigation, he recommended on May 7, 1904, that \$1,800,000 be spent to recondition roadways; construct a modern power generating, transmission, and conversion system; and acquire new lighter cars. The receivership committee acted immediately and instituted a program which planned eventual replacement of St. Louis cars with fifty lighter, moderate speed, and low power consuming convertible type city-suburban cars on all routes except Allentown-Chestnut Hill.

Lehigh Valley Traction Company's inability to finance new track construction to cement plants north of Allentown brought aid from the cement industry itself. Several cement producers together organized, financed, and constructed the Whitehall Street Railway between LVT's Egypt terminus and Levans village on the





Howard P. Sell Collection

No. 183, Allentown bound Philadelphia Division, or Liberty Bell Route, Limited passing Montgomery Traction Company No. 6 in Lansdale, 1910.



Henry L. Wismer Postcard Collection

Passengers and No. 174, southbound Philadelphia Limited, pose for postcard photographer in Lansdale, 1908. Although equipped with a locomotive type pilot and Hunter destination sign, the car had not yet been painted chrome green.



Slatington Division south of Schnecks-ville. LVT, contracted as operators, inaugurated service on July 24, 1904, with small single truck cars. Later, a revision of the Catasauqua-Hoken-dauqua bridge over the Lehigh River allowed St. Louis car operations between Levans and Catasauqua via Egypt and Coplay.

Schedule changes effective October 10, 1904, established a high speed limited service operated with St. Louis cars from Slatington through Allentown and Bethlehem to Nazareth. A motorman and one passenger met sudden death on December 17, 1904, in a collision involving Slatington bound No. 156 and Allentown bound No. 149 on the curve between Iron Bridge Siding near Troxell's Crossing and Kratzer's Siding near Greenwalds. Throughout the investigation each conductor claimed that he had properly set the hand operated signal system; however, at the time of impact the Iron Bridge Siding light indicated a clear board. The coroner's jury absolved both crews and further ruled that an unknown person had evidently reset Kratzer's Siding light after the northbound car had entered the single track main line. By June 5, 1905, LVT had installed a key type signal system throughout the property and had repaired both cars.

When the famous horse Dan Patch paced a record breaking mile performance of one minute and fifty-six seconds in Memphis, Tennessee, on October 26, 1904, LVT's St. Louis car No. 156 acquired the sobriquet "Dan Patch" from local harness racing enthusiasts. Operating and maintenance crews thereafter referred to No. 156 more often by name rather than by number. No other St. Louis car ever received a nickname.

Electric railway operations, a serious business, produced some amusing moments. During 1904 three unusual separate incidents occurred on

P&LVT which can only be properly appreciated by natives of eastern Pennsylvania. Male passengers of Pennsylvania-German extraction, misunderstanding the conductor's Springhouse stop announcement for their dialect expression "shpring raus", translated "jump out", left their seats and unhesitatingly leaped from the fast moving St. Louis car's rear platform onto the paralleling dirt toll road. Dusty, bruised, and bewildered the "Pennsylvania Dutchmen" re-boarded the car which had stopped as soon as the conductor had signalled the motorman.

LVT's financial problems reached their inevitable climax in 1905. Efforts by the reorganization committee to have bond holders trade an equal amount of first mortgage bonds for 60% second mortgage bonds and 40% preferred stock failed to receive approval. Most bond holders favored a public sale of properties. On May 6, 1905, Guarantee Trust Company of New York City predicted a public sale if LVT defaulted in its two million dollar payment of maturing bond coupons. LVT's inability to meet this financial obligation had been a foregone conclusion.

## **LEHIGH VALLEY TRANSIT COMPANY FORMED**

William F. Harrity, representing most reorganization committee members, at public sales conducted on the Lehigh County courthouse steps on June 13, 1905, successfully bid one million dollars for Philadelphia and Lehigh Valley Traction Company (trackage only) and on June 20, 1905, successfully bid two hundred and seventy-five thousand dollars for Allentown and Slatington Street Railway (trackage only) and two million dollars for Lehigh Valley Traction Company (trackage and rolling stock) and Coplay, Egypt, and Ironton Street Railway (trackage only). Other transit





Howard P. Sell Collection

Chestnut Hill (Philadelphia) bound No. 178 passing Allentown bound No. 179 in School Siding north of Center Valley along original Philadelphia and Lehigh Valley Traction Company right of way, 1908. Both cars had been converted to single end operation and had been painted chrome green.



John Gibb Smith, Jr., Collection

Crew of northbound local No. 183 pose for postcard photographer in Fort Washington along Bethlehem Pike, 1908. The bridge spanned the Philadelphia and Reading Railway's Bethlehem, or North Penn, Branch.



magnates attended both sales but declined to enter bids. At the sales' conclusion Mr. Harrity surprisingly predicted, considering past events, electric railway service between Allentown and Broad and Market Streets in Philadelphia's business district.

New ownership immediately produced a new organization. All former Johnson owned street railway properties in eastern Pennsylvania merged on July 20, 1905, and formed the Lehigh Valley Transit Company. Five days later Harry C. Trexler and Edward M. Young, respectively the newly elected president and vice-president, together with George O. Albright, Tom L. Johnson, William F. Harrity, George H. Frazier, Edward B. Smith, Arthur E. Newbold, and David Young, formed the board of directors. Effective July 26, 1905, and continuing until the U. S. District Court in Philadelphia approved both sale and reorganization and the Commonwealth of Pennsylvania approved a new charter, the properties operated as Lehigh Valley Passenger Railway, Allentown and Slatington Passenger Railway, and Philadelphia and Lehigh Valley Passenger Railway. One single truck car carried a Lehigh Valley Passenger Railway designation for legality purposes. Deeding of properties from traction company to passenger railway company ownership was completed on July 29, 1905.

The Lehigh County Recorder of Deeds office received the Lehigh Valley Transit Company charter, dated November 3, 1905, from the Commonwealth of Pennsylvania on November 16, 1905. The new owners meanwhile had accelerated improvement plans. At the August 24, meeting the directors approved construction of a large modern powerhouse equipped with 25 cycle AC turbo-generators and a 13,200 volt three phase power distribution system with substations, and ordered ninety-six pound rail, Trilby pattern, from Loraine Steel

Works; on September 12, ordered ten closed and ten semi-convertible lighter cars from The J. G. Brill and Company, Philadelphia, Pennsylvania; and on October 31, approved purchase of land at 14th and Gordon Streets in northwest Allentown for erection of a new carbarn. Circa 1905 LVT, complying with state laws, had installed dry toilet accommodations opposite the left rear window at the No. 2 end of Philadelphia Division St. Louis cars Nos. 172 to 186 inclusive. "L.V.T.Co." also appeared painted in bold letters on both sides and numbers on both ends of St. Louis and other type cars.

LVT's proposed Chestnut Hill-Delaware Water Gap summer excursion service failed to materialize in 1905. After a three year conflict Bangor and Portland Traction Company underpassed the Delaware, Lackawanna and Western Railroad on August 28, 1905, and entered Portland from the west. However, when Lehigh and New England Railroad Company refused a physical crossing of the northward extension to the river resort Portland-Stroudsburg trackage plans collapsed.

Ten double truck standard semi-convertible cars Nos. 187 to 196 inclusive, built by Kuhlman Car Company, and ten similar double truck closed cars Nos. 197 to 206 inclusive, built by American Car Company, but all ordered through The J. G. Brill and Company, arrived in Allentown between November 22, and December 12, 1905, and replaced single truck cars assigned to Allentown-Egypt and Allentown-Freemansburg routes and shared service with St. Louis cars on Allentown-Emaus-Macungie and Allentown-Bethlehem-Hellertown routes. LVT's program to replace St. Louis cars in suburban service supposedly had been inaugurated.

LVT corrected and adjusted undesirable conditions along various routes





Howard P. Sell Collection

Motorman and No. 175, the southbound Philadelphia Limited, pose in Souderton at Summit Street overpass of Philadelphia and Reading Company's Bethlehem Branch, 1908.



Howard P. Sell Collection

Crew poses with No. 184, southbound Philadelphia Limited, at Telford Junction near Souderton, 1908. Although No. 184 had been painted chrome green and had locomotive type pilots attached, the Hunter destination signs had not yet been installed in the front and rear clerestory window spaces.



as required but applied particular attention to Philadelphia Division conditions. Montgomery County and Springfield Township officials on February 17, 1906, approved Lehigh Valley Transit Company and Philadelphia Rapid Transit Company trackage revisions leading into a new station at Erdenheim (Chestnut Hill) east of the famous Bethlehem Pike. The structure provided office space for LVT's Philadelphia Division dispatcher, protected waiting room facilities, and a covered walk-way between LVT and PRT cars. In addition, LVT established a ten car capacity storage area between the station and highway.

Two accidents, neither producing fatalities, temporarily reduced the St. Louis car operating roster by two. Car No. 146 with crew and passengers aboard departed from Nazareth for Allentown at 12:30 a.m., June 7, 1906, and within a few minutes, lacking sufficient air for braking, sped down Main Street hill, derailed on the right angle curve at Main Street and Easton Road intersection, plowed through a potato field, and upset. Fortunately no serious injuries resulted. LVT reviewed the costly body damage and assigned No. 146 to storage with Nos. 159 and 170 in nearby Hecktown Car barn. The manner in which car No. 170 had been damaged has never been officially disclosed, but veteran motormen believe that it had upset at the Washington Avenue curve in Bethlehem on the Bethlehem-Nazareth route. After the body toppled over, one truck remained on the track and continued southward for several hundred feet toward Bethlehem's business district. Only a hill prevented its entrance onto trackage used by city and inter-urban routes.

LVT's rehabilitation program moved forward rapidly. During summer, 1906, line department crews completed the setting of poles for hightension power lines along the Slatington and

Nazareth routes and began setting poles along the Chestnut Hill route. In addition, plans included construction of new substations at Slatington and Siegersville along the Slatington Division; Coopersburg, Sellersville, Souderton, Lansdale, and Ambler on the Philadelphia Division; Hecktown on the Nazareth line; Catasauqua on the Northampton route; and in Bethlehem. Temporarily, substation equipment placed in a railroad box car setting in Couter Siding operated until Lansdale substation had been energized. LVT eventually converted the box car into freight car No. 520, later renumbered No. C1. On March 9, 1907, LVT officially moved passenger and most work equipment from South Allentown Car barn into the fifty car capacity 14th Street Car barn located northwest of Allentown's business district. Soon the surrounding area included paint, carpenter, machine, and electric shops as well as the line department, a storage yard, and LVT's main office.

## **R. P. STEVENS ELECTED LVT PRESIDENT**

At the board of directors meeting held July 7, 1907, LVT officials elected as president Mr. R. P. Stevens, a University of Maine graduate who had also completed post graduate courses at Massachusetts Institute of Technology. Supervision of Everett Railway and Electric Company construction in the state of Washington in 1900; Northern Pacific Railway Company's Everett-Snohomish electrification project; and Auburn and Syracuse Railway general management, comprised Mr. Stevens' electric railway background. The new president assumed executive duties on August 15, 1907, and during his six year administration directed LVT's rise from a secondary street railway system into one of the outstanding properties in eastern United States. Efficient interurban, suburban, and city passenger services and a convenient





Howard P. Sell Collection

Crew poses with No. 184, southbound Philadelphia Limited, on original Inland Traction Company right of way near Sellersville substation, 1908.



Howard P. Sell Collection

Crew and No. 180 pose in Souderton while operating an intradivision Philadelphia Division local schedule, 1909.



freight service, all of which became a reality during Mr. Stevens' direction, in many respects represented a modified fulfillment of Albert L. Johnson's dream. St. Louis cars immediately became a vital cog in Mr. Stevens' operational plans and achieved the status for which they had been designed.

Monthly executive meetings produced directives for physical improvements as well as announcements of projects completed. October, 1907, publicity releases included the completion of a huge power plant equipped with 500, 1000, and 2500 horsepower turbines; commencement of the telephone system installation along Slatington and Philadelphia Divisions; and adoption of a chrome green, red, black, and gold trim paint scheme in place of Broadway yellow, tan, cream, silver, and black colors. After the telephone system had been installed, Slatington and Philadelphia Division St. Louis cars carried portable telephones for use at switches. Telephones plugged into weather proof jack boxes on line poles.

Car No. 175, painted chrome green with red stained window sashes and doors; dull red roof; gold numbers, stripes, and newly designed LVT scroll monograms; black poles, bumpers, and undercarriage; and equipped with a wooden locomotive-type pilot underneath the No. 1 end platform, appeared in Allentown-Chestnut Hill service on November 1, 1907. Car No. 166, painted chrome green with red stained window sashes and doors; dull red roof; silver numbers, stripes, and monograms; black poles, bumpers, and undercarriage; and equipped with an early version of the lifeguard fender underneath both platforms, appeared in Allentown-Slatington service. Wood locomotive pilots appeared under both ends of car No. 184 on December 7, 1907, and within a few weeks St. Louis single end cars Nos. 172 to 179 re-

ceived a pilot installation under the operating end only and double end cars Nos. 180 to 186 under both platforms.

Until 1912 most cars of the Nos. 172 and 179 group operated as single end cars with WH L4 controls at the No. 1 end only and a single spring trolley pole base at the No. 2 end. Wye trackage at Chestnut Hill station, entrance to Souderton Car barn from the main line, Red Lion Junction in Quakertown, and 6th and Hamilton Streets intersection in Allentown provided reversal facilities for single end cars. LVT motormen nicknamed the cumbersome WH L4 control the "Merry Widow". The wide sweep of the large lever during double wind-up had been likened to the large hat worn by the leading actress in Franz Lehar's operetta **The Merry Widow**. Americans first heard the lilting strains of the Hungarian composer's most famous music in October, 1907.

Mechanical and operational adjustments to St. Louis cars from late 1907 until 1911 included relocation of five inch chime whistles from underneath both platforms to a vertical position on the roof at the right side of the center window; later ten inch single tone whistles were gradually installed at the No. 1 end of Philadelphia Division cars in a horizontal position close to the roof; further development placed ten inch whistles on all St. Louis cars above the right front and left rear windows on the letterboard, a cord and valve located near the engineer's valve on both platforms activated the re-located whistles; replacement of Christensen air brake system with Westinghouse's straight air system; replacement of St. Louis No. 23 trucks and original WH 56 motors with Baldwin MCB2X trucks equipped with WH 304 motors and 34" wheels; two cars, Nos. 176 and 181, for a brief time were equipped with spoked wheels, the tires of which bolted to the wheel; installation of a





Royden M. Clymer

Crew and No. 182, enroute to Delaware Water Gap in excursion service, pause for photograph in Lansdale, 1909. LVT displayed this scene in the Allentown ticket office for many years.



Richard S. Clover Collection

Crew and No. 172, assigned to Delaware Water Gap excursion service, pose for publicity photograph along Philadelphia Division between Ambler and Fort Washington, 1909. The crew member in the light uniform provided a commentary during the trip.



hot water heating system with a Cooper coal stove in the right front corner, an expansion tank either above the stove or on the roof, and pipes encircling the seat section at floor level in Philadelphia and Slatington Divisions' assignees only; placement of a small coal bin near the stove; partitioning of cars Nos. 158, 161, 164, 166, 169, and 172 to 186 inclusive into smoker-coach sections, the smoker compartment with a partition and sliding door (No. 169 only had been equipped with a double hinged door) extending from No. 1 end vestibule to and including the area as far as the third window; replacement of walkover seats at each corner with stationary side seats; removal of marker light brackets from the left front and right rear dash location and placement of one standard flag and one marker light bracket on the front left and right rear corner posts; equipping each car with one red, white, and green combination marker lamp; replacing Wilson type trolley catchers with the Earll type and moving catchers from right to left side of the dash; installation of four Utility ventilators in place of clerestory ventilators on each side of cars with smoker sections; removal of front and rear clerestory windows and installation of wide illuminated Hunter mechanical roller destination signs; relocation of metal destination sign hooks from underneath front and rear center windows to right front and left rear windows; and revising trolley base plus adoption of six inch trolley wheels. During the adjustment period Brill No. 27E1½ trucks replaced Baldwin trucks under No. 142. LVT retained metal destination signs on many cars as supplements to roll signs until the mid-1920's. Installation of WH 304 motors increased the St. Louis car's maximum speed from thirty-five to forty-five miles per hour. Both Slatington and Philadelphia Divisions employed a lamp and flag classification system.

## THE LIBERTY BELL ROUTE NAMED

Operational improvements gradually changed the Philadelphia Division from a long rural route to a modern high speed electric interurban railway system. Allentown-Chestnut Hill schedules adopted December 1, 1907, advertised the Philadelphia Division as the Liberty Bell Route. Most track mileage paralleled, at various distances between Erdenheim and Center Valley, the Bethlehem Pike over which patriots hauled the famous bell in 1777 to safety in Zion's Reformed Church in Allentown while British soldiers occupied Philadelphia. St. Louis cars operating Liberty Bell Route limited schedules until 1912 carried a white rectangular sign beneath right front and left rear windows with a Liberty Bell Drawing and words "Liberty Bell Route Limited" painted black.

Improvements to LVT property during March, 1908, included completion of the Philadelphia Division's high-tension line and installation of the Slatington Division's telephone dispatching system. On March 31, 1908, LVT received four large Brill double truck open cars Nos. 301 to 304 inclusive, equipped with only a hand brake system, for anticipated Chestnut Hill-Delaware Water Gap summer excursion service. Entrances and interior seating of the new cars resembled that of a conventional closed car and high side screens protected the passengers. After several test trips had been conducted over the Liberty Bell Route and possibly one trip to Portland, LVT assigned 301 Series cars to city-suburban summer charter service and to regular Bethlehem and Allentown city service. LVT, positive that these large summer cars would operate to Delaware Water Gap, had ordered the builder to paint "Liberty Bell Route" on the side letterboards. In 1909 an Allis Chalmers air brake





**John P. Scharle Collection**

LVT photographed No. 186 in Ambler along Philadelphia Division for publicity purposes, 1909.



**John P. Scharle Collection**

Northbound Philadelphia Division limited No. 186 setting before famous Fortside Inn, Whitemarsh, along historic Bethlehem Pike, 1909.



system was installed in each 301 Series car, but LVT made no further attempts to use them in Delaware Water Gap excursion service.

## DELAWARE WATER GAP EXCURSIONS

LVT finally established Chestnut Hill-Delaware Water Gap summer excursion service after several successful experimental trips conducted during June, 1908. Philadelphia newspaper reporters, guests of Mr. R. P. Stevens, traversed the route using St. Louis cars from Chestnut Hill to Nazareth and Slate Belt Electric Railway cars over Slate Belt Electric Railway Company trackage between Nazareth and Bangor and Bangor and Portland Traction Company trackage from Bangor to Portland. Delaware, Lackawanna and Western Railroad steam locomotive drawn trains conveyed the group from Portland to the resort area. In Allentown at noontime the entourage dined on the Hotel Allen balcony at 7th and Hamilton Streets and visited nearby historic Zion's Reformed Church where patriots had safely concealed the Liberty Bell from the British in 1777.

LVT assigned St. Louis cars No. 177, the first car of the Nos. 172-179 group re-equipped with dual controls, and No. 182 specifically to Chestnut Hill-Delaware Water Gap service and added more suitable passenger accommodations for the long ride. Innovations of these two cars included black leather seats with arm rests, baggage racks, carpeted floor, iced drinking water facilities, a uniformed guide who through a megaphone provided a factual commentary as the trip passed industrial and historical points of interest, and a more elaborate Liberty Bell Limited sign painted in green and gold colors. Diagrammed seating arrangements allowed not more than a maximum seated attendance for each trip. Philadelphia area passengers purchased tickets, includ-

ing DL&W railroad accommodations, at either Strawbridge and Clothier department store in Philadelphia's business district or at the PRT-LVT ticket office in Chestnut Hill (Erdenheim). Allentown area passengers procured tickets at LVT's ticket office near the southeast corner of 6th and Hamilton Streets. At 9:30 a.m., July 17, 1908, the first revenue producing "Delaware Water Gap Limited" departed from Chestnut Hill station on a six hour and forty minute schedule. In emergencies LVT assigned other St. Louis cars of the Nos. 172 to 186 group to excursion service. No. 172, also re-equipped with dual controls, joined the excursion assignees circa 1909. After the excursion season closed in September, all cars returned to regular Philadelphia Division schedules.

Delaware Water Gap excursion schedules varied from season to season as well as within the same season. St. Louis cars with locomotive type pilots, hampered by clearance difficulties, operated only as far as Nazareth. From Nazareth excursionists proceeded to the gap via Slate Belt Electric Railway Company street cars, smaller than St. Louis cars, and DL&W trains. Circa 1912 St. Louis cars equipped with Providence fenders instead of pilots operated the entire distance to Portland. Dinner arrangements varied too. At one time or another the passengers dined in hotels either in Allentown, Rittersville, Bethlehem, or Nazareth.

Mr. R. P. Stevens, seeking decreased travelling time between Philadelphia's business district and points along the Liberty Bell Route, inaugurated a joint Lehigh Valley Transit Company and Philadelphia and Reading Railway passenger transfer accommodation at Lansdale. Effective October 5, 1908, St. Louis cars of the Nos. 172-186 group, designated as "Lansdale Limited", departed daily from the 6th and Hamilton Streets terminus in





Howard P. Sell Collection

Philadelphia Division assignee No. 186 operating northbound on track paralleling Bethlehem Pike north of Flourtown, 1909



Howard P. Sell Collection

Allentown bound Liberty Bell Route Limited No. 186 entering Coopersburg from the south along the original route, 1909. The home of Tilghman Cooper, breeder of fine cattle, was located west of the track.



Allentown at 7:23 a.m. and 2:28 p.m. and met P&R steam drawn passenger trains at Lansdale. The entire three hour and nine minute trip between the two business districts cost ninety-five cents — LVT received sixty-five cents and the railroad thirty cents. Returning from Philadelphia, patrons patronized the services at their own convenience. Later, LVT and P&R regular schedules provided several transfer arrangements and the "Lansdale Limited" lost its identity.

Effective April 5, 1909, Philadelphia Division crews used the large, but efficient, multi-fare recording Ohmer registers for the first time. Braces fastened against the ceiling of St. Louis cars along the right side supported recording straps and rods, with hand grips, leading to a dial and register. The new fare recording system established a method whereby the conductor collected and immediately recorded complete trip fares and issued seat, or hat, checks. Previously, and continuing as established policy over other routes, the conductor lifted and recorded fares in each zone, but on the Nazareth line, and later on the Easton route, the conductor collected complete trip fares and issued checks but rang up a fare for each passenger aboard as the car entered a different zone. Slatington Division St. Louis cars received Ohmer equipment a few months after the Philadelphia Division installations. In Philadelphia and Slatington Division cars LVT retained a conventional manual fare recording system for city operations along the side opposite Ohmer registers. Each Ohmer register cost LVT a sixteen cents per day rental fee.

Mr. R. P. Stevens announced on July 16, 1909, a Philadelphia Division curve elimination program designed to permit the establishment of a two hour Allentown-Chestnut Hill schedule. In conjunction with high speed schedules Mr. Stevens had hoped to effect a physical transfer

arrangement with The Pennsylvania Railroad somewhere near Chestnut Hill. Veteran and retired LVT employees recall surveys and discussions which would have also allowed the operation of The Pennsylvania Railroad trains into Allentown via a tunnel bored through South, or Lehigh, Mountain.

In 1909 LVT distributed a well composed and illustrated publicity booklet entitled **A Little Trip Through History**. Basically the text dealt briefly with historical and industrial backgrounds of areas adjacent to trackage from Chestnut Hill through Allentown and the Lehigh River valley to Delaware Water Gap. Historical events, particularly those of colonial American Revolutionary War periods; interurban operational practices; beautiful pastoral scenery; and restful vacation facilities provided most of the subject matter. Appropriate photographs provided visual evidence of topics discussed. Several photographs depicted St. Louis cars either setting at or passing well known locations or landmarks along the Liberty Bell Route.

Effective December 10, 1909, and continuing under similar circumstances until abandonment in 1931, Slatington Division St. Louis cars inaugurated "Slatington Limited" operations, a fifty-five minute Allentown-Slatington schedule serving numbered stops only. On January 10, 1910, for two daily trips in each direction, LVT and Slate Belt Electric Railway, each contributing one car, introduced "Bangor Limited" operations via Bethlehem. LVT and Slate Belt crews transferred from car to another at Nazareth Fair Ground Siding, but the cars travelled the complete route. Other Nazareth Division runs, with LVT crews in complete control, operated from Allentown through Bethlehem and Nazareth to Belfast and return. Circa 1912 "Bangor Limited" operations ended and LVT crews and cars terminated all trips at Main and





Randolph L. Kulp Collection

Allentown bound Liberty Bell Route Limited No. 177 ready to leave Telford Junction, north of Souderton, after completing connection with single truck car No. 111, the Telford local, 1909.



James H. Richards Collection

LVT car No. 184 and a Philadelphia Rapid Transit Company (Union Traction Company) car setting on their respective tracks at Chestnut Hill station, Erdenheim, opposite White City Park, 1910.



Belvidere Streets in Nazareth. Shortly after World War I Nazareth Division schedules operated from Broad and New Streets in Bethlehem.

Between 1902 and 1912, with occasional exceptions. LVT assigned St. Louis cars by number groups to various divisions: Nos. 137 to 156 and some 160's to Emaus-Macungie, Bethlehem, and Nazareth routes; some 150's and Nos. 158, 161, 164, 166, and 169 to the Slatington Division; and Nos. 170 to 186 inclusive to the Philadelphia Division.

Use of one division's St. Louis cars on another division often presented complications. A city-suburban St. Louis car with clock-type registers proved adequate but inconvenient for zone collections on Slatington and Philadelphia Divisions. On one occasion circa 1910 in an evening emergency the Allentown dispatcher assigned the only available St. Louis car, a Philadelphia Division assignee, to the Allentown-Slatington route. At 6th and Hamilton Streets in Allentown the crew discovered that the illuminated destination sign had been rolled to "Philadelphia" and that, according to rules, the Philadelphia Division crew last operating the car had locked the toilet compartment in which the destination sign handle was located. Since Slatington Division crews did not have toilet door keys assigned to them, the crew had no other alternative than to proceed to Slatington with an improper destination brightly illuminated. At all stops both crew members shouted the proper destination into the darkness.

Mr. E. C. Spring, Philadelphia Division's new superintendent, announced early in 1910 several divisional improvements: installation of Philadelphia Division telephone dispatching system; completion of the repainting project for all Philadelphia Division St. Louis cars; and cleaning of each St. Louis car by maintenance crews

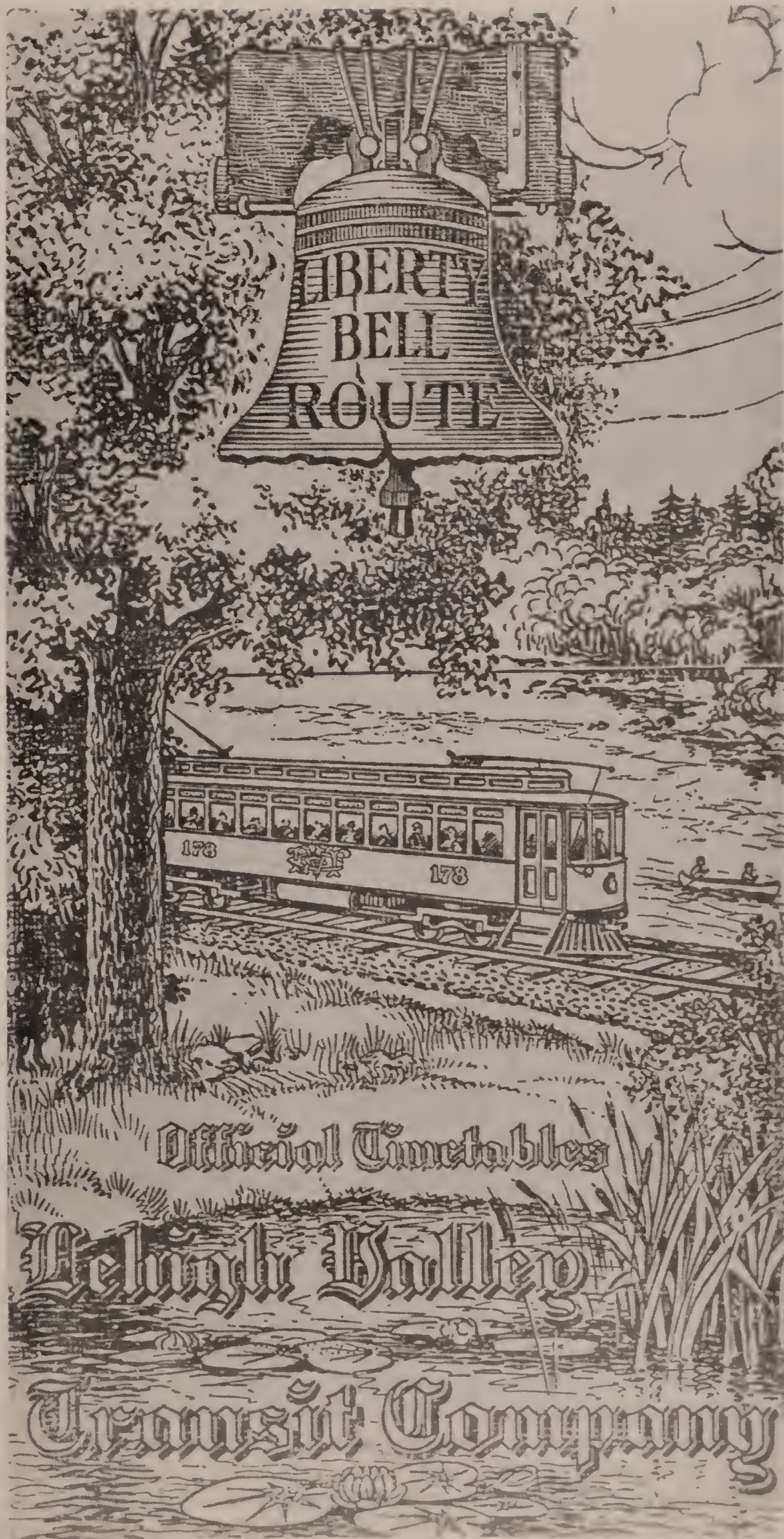
at Chestnut Hill before departure to Allentown. Repainting of Allentown Division St. Louis cars from Broadway yellow to chrome green ended circa 1912 with the out-shopping of No. 143.

### REVISED LIBERTY BELL ROUTE PROPOSED

A news item in the Friday, April 1, 1910, edition of the *Philadelphia Evening Bulletin* unofficially revealed LVT's future Philadelphia Division policy. E. B. Smith and Company, one of LVT's financial backers, purchased the Philadelphia and Western Railway, a third rail system operating between 69th Street, Upper Darby, and Strafford, and predicted a LVT and P&W connection at either Villanova or Strafford. Accordingly, Mr. Stevens' anticipated physical connection or transfer arrangement with The Pennsylvania Railroad in the Chestnut Hill area had been rejected by his superiors.

President R. P. Stevens and LVT's board of directors acted quickly to revamp the Philadelphia Division into a modern high speed electric interurban route similar to steam railroad standards. Proposed changes included an improved high speed local passenger service. Between 1910 and 1913 Philadelphia Division's rehabilitation program, costing almost five millions of dollars, erected a heavy plate girder viaduct across Trout Creek meadows and Philadelphia and Reading Railway's East Penn Yard and main line in South Allentown in place of a spindly truss type structure; eliminated two Aineyville Junction curves and constructed straight trackage; revised and relocated Lehigh Mountain trackage from Mountainville to Lanark; relocated Rosedale-Quakertown track from roadside to private right of way; relocated trackage north of Perkasio and from Perkasio streets to a new direct route; bored a





Howard P. Sell Collection

Philadelphia Division public timetable, 1910, shows a rather crude drawing of St. Louis car No. 178 in an otherwise ornate arrangement. Lehigh Valley Transit Company adopted the timetable cover design in 1908.



tunnel through the Philadelphia and Reading Railway high right of way fill at Perkasio; relocated Perkasio-Sellersville and Sellersville-Derstines track from streets and roadsides to private right of way; relocated Souderton-Lansdale track from roadside to private right of way; constructed the new Lansdale-Norristown route from a point south of Lansdale to a physical connection with the third rail trackage of the Philadelphia and Western Railway at Norristown; established Wales Junction, the meeting point of the old and new routes; eliminated the double horseshoe curve in Ambler; installed a track circuit block signal system from Emaus Junction to Brush Siding near Norristown; and constructed unique waiting stations at Aineyville Junction and Colesville road. By purchasing the entire Montgomery Traction Company in 1911, LVT obtained both the necessary property and legal right to enter Norristown from Lansdale.

Failure of an independent electric railway to construct a route from Stroudsburg through Delaware Water Gap near the Delaware River's west bank hampered efficient transportation of passengers between the vacation area and terminus of LVT's "Delaware Water Gap Special" cars in Portland. As a result, a twenty passenger surrey top sight seeing type Mack auto, designed by R. P. Stevens, effective June 6, 1910, replaced Delaware, Lackawanna and Western Railroad's train service and commenced transportation of both baggage and passengers between Portland and various resort hotels. Appropriately "The Liberty Bell Limited Automobile, Portland To Delaware Water Gap" identifications appeared on the omnibus.

Expanded service over all city and suburban routes required new passenger equipment in 1910. Ten double truck semi-lightweight deck roof convertible pay-within Brill cars, later

revised to pay-as-you-enter, Nos. 600 to 609 inclusive, introduced July 22, 1910; ten similar double truck Brill convertible arch roof pay-as-you-enter cars Nos. 610 to 619 with lifeguards instead of Providence fenders, effective December 18, 1911; and four slightly heavier similar Brill car Nos. 620 to 623 inclusive, ordered February 14, 1912, between 1910 and 1912 replaced St. Louis cars in various Allentown, Bethlehem, South Bethlehem, and Hellertown services. Despite removal from one of LVT's most patronized divisions, St. Louis cars retained regular Emaus-Macungie, Philadelphia, Slatington, Nazareth, and Northampton - Siegfried route assignments and appeared frequently as substitutes for all other types throughout the system.

Right of way improvements continued steadily. Track crews, on July 29, 1910, commenced construction of the New Street-Washington Avenue cut-off in Bethlehem on the Bethlehem-Nazareth line, a revision which eliminated three right angle curves and established one long sweeping curve, and on August 10, 1910, LVT announced the \$50,000 program which during ensuing months eliminated six Slatington Division curves between Troxell's Crossing and Orefield and relocated tracks from roadside onto private right of way. All right of way revision projects improved the St. Louis cars' operating performances.

The 14th Street Shop in Allentown, circa 1910, rebuilt St. Louis car No. 176 as a combination passenger-baggage car. Revisions included removal of the side and first two double seats along the right side; removal of the first two windows and body sheathing and installation of a large doorway and sliding door; retention of smoking compartment partition; relocation of the stove to the left side corner at the vestibule partition; retention of toilet facilities at the left side No. 2 end; and installation of





Randolph L. Kulp Collection

No. 143, painted "Broadway" yellow, and crew and maintenance worker posing at 17th and Hamilton Streets, Allentown, 1911, after conclusion of a Nazareth-Allentown trip. No. 143 was the last St. Louis car converted from yellow to chrome green paint scheme.



Orville S. Kulp

Nazareth bound No. 144 and crew posing at Hecktown substation north of Bethlehem along the leased Bethlehem and Nazareth Street Railway trackage, 1911.



wooden bench type folding seats across the doorway in the baggage compartment for potential passenger accommodations. No. 176's varied baggage assignments at one time or another included hauling milk and newspapers along the new Liberty Bell Route and Wales Junction-Chestnut Hill trackage; after 800 Series limited cars had been introduced in 1912, hauling of trunks and luggage between Red Lion Junction and Quakertown business district; and for a brief time hauling of mail in both directions to various towns between Slatington and Bangor. Gracious division dispatchers frequently permitted employees to move personal household furnishings from one home to another in No. 176. Many people recognized No. 176 as the official funeral car. While the coffin with corpse set in the baggage compartment, mourners occupied the coach section.

Other St. Louis cars received funeral assignments either to convey mourners only or both coffin and mourners to cemeteries adjacent to all LVT routes. In coach and coach-smoker cars the pallbearers set the coffin on the rear vestibule floor. LVT also carried bagged mail under contract with the United States government on certain trips between Allentown and Slatington, Allentown and Macungie, and Bethlehem and Nazareth either in the smoking compartments of St. Louis cars or heaped on the first few rows of seats at the operating end of all-coach cars.

Improved Philadelphia Division local patronage required additional equipment in 1910. LVT removed wrecked St. Louis car No. 170 from Hecktown Car barn storage and reconditioned it for Philadelphia Division service. At approximately the same time LVT transferred No. 158 from the Slatington Division to the Philadelphia Division roster. Beginning in 1910 and lasting until 1915 electricians removed

the WH K14 and WH L4 control systems from St. Louis cars and installed the Westinghouse HL system. During the same period Baldwin curved equalizer bar trucks replaced Baldwin MCB2X trucks under Nos. 172 and 174.

An explosion of the hot water heater in a Slatington Division chartered funeral car on March 31, 1911, scalded several passengers. As the result of this accident, LVT gradually removed hot water heating systems from St. Louis and other cars so equipped and installed hot air systems. An electric blower forced hot air from the heater, located at the No. 1 end's right side, through a duct located along the floor against the right side only. On February 10, 1912, before the project had been completed, the hot water heater exploded in Philadelphia Division St. Louis car No. 184. LVT eventually standardized heating systems of all St. Louis cars and installed hot air systems in cars which had retained the original centrally located coal stove. Veteran crew members recall that during the use of the original heating arrangement the wintertime passenger complement usually preferred a seat close to the stove.

On Monday, September 4, 1911, six years after initial plans had been proposed, street cars operated from Stroudsburg through Delaware Water Gap on the Stroudsburg, Water Gap, and Portland Railway, a company in which LVT had invested fifty thousand dollars, and terminated on the north side of the Lehigh and New England Railroad's main line north of Portland. In October the Bangor and Portland Traction Company extended their trackage northward from the center of Portland, but the railroad again refused crossing rights. LVT discontinued autobus service between Portland and the resort area and, at the opening of the 1912 vacation season, operated excursion cars with-





Howard E. Johnston Collection

No. 182, the Lehigh Valley Transit Company's Delaware Water Gap excursion limited, setting at Portland terminus, 1912. Bangor and Portland Traction Company cars set to the north and a Stroudsburg, Water Gap, and Portland Railway Company car is barely visible in the background across the Lehigh and New England Railroad Company's main line.



Orville S. Kulp

Crew members and friend pose in front of No. 138 at 17th and Hamilton Streets, Allentown, after completing a Bangor Limited trip via Bethlehem and Nazareth, 1912.



in a few feet of the railroad's main line. Passengers walked across the railroad track between Slate Belt Electric Railway and LVT cars and SWG&P cars.

### NEW LIBERTY BELL ROUTE OPENED

President R. P. Stevens ordered six large railroad roof heavy wood-steel type high speed combination interurban cars Nos. 800 to 805 inclusive from Jewett Car Company, Newark, Ohio, on February 10, 1912, for Allentown-69th Street Terminal service via Norristown. LVT's decision to enter the terminal in Upper Darby at Philadelphia's boundary via the Philadelphia and Western Railway's new third rail Villanova-Norristown projection heralded the Liberty Bell Route era dominated by large 800 Series interurban cars and relegated St. Louis cars to local high speed service. LVT inaugurated station-stop limited service with the new cars on December 12, 1912, and assigned St. Louis cars to Allentown-Chestnut Hill and Lansdale-Norristown local service. Car No. 158, operating the Lansdale-Norristown local schedule, recorded LVT's first revenue trip over the new Lansdale-Norristown trackage. Effective with the inauguration of new service Philadelphia Division limited schedules and cars operated from Fairview Car barn in Allentown, but local schedule operations and St. Louis cars remained at Souderton Car barn.

Use of the continuous track circuit automatic block signal system, coincidental with the introduction of 800 Series interurban cars, required a minor adjustment to St. Louis cars and non-revenue cars assigned to the Philadelphia Division. Shop crews placed combination flag and lantern sockets on all four corner posts near the roof base, and thereafter each car carried two sets of white, green, and red flags and four Adlake oil signal-marker lights and one conductor's

white and red hand lantern. Conductors stored lights and flags on top of the toilet compartment. At approximately the same time the roofs of St. Louis cars were painted chrome yellow to conform to the scheme introduced by 800 Series cars.

Until LVT received six additional 800 Series cars in July, 1913, St. Louis cars occasionally operated Liberty Bell Route limited schedules over the Allentown-Norristown section during emergencies. Circa 1913 St. Louis cars replaced sundry single and light-weight double truck cars which had been assigned to Red Lion Junction-Quakertown - Richlandtown local schedules effective in 1902. In 1904, after the main line had been relocated outside of Telford, Telford Junction-Telford service retained single truck cars but St. Louis cars under limitations appeared as substitutes. St. Louis cars, unable to negotiate the Lincoln-Main Streets curve to reach the terminus one car length beyond without occasionally breaking the brake's radial bar casting, terminated trips before the curve. LVT abandoned Telford spur on February 27, 1925, and Red Lion Junction-Quakertown-Richlandtown trackage on May 31, 1929.

LVT assigned cars Nos. 144 and 150, one as an alternate, to "Easton Limited" service inaugurated jointly with Easton Transit Company between Allentown and Easton via Bethlehem effective March 17, 1913. A white sign board lettered "Allentown-Bethlehem-Easton Limited" in black paint hung below the right front window and a long narrow green board lettered "Allentown, Limited, Easton" in gold paint hung on both sides below the center window section. Each day LVT supplied one St. Louis car and Easton Transit Company one lighter weight double truck car. LVT crews manned cars between Allentown and Broad and Main Streets in Bethlehem and ETC crews from Easton





Elwood C. McEllroy Collection

Philadelphia Division local car No. 174, southbound for Chestnut Hill, leaving South Allentown viaduct spanning Trout Creek meadows and Philadelphia and Reading Railway's main line and East Penn Yard, 1913. The motorman is attired in a blue pin stripe coat and overall uniform.



Orville S. Kulp

No. 150 setting at 17th and Hamilton Streets, Allentown, on March 17, 1913, the first day of Easton-Allentown Limited service. Conductor Orville S. Kulp, now a member of the Lehigh Valley Chapter, N.R.H.S., persuaded the motorman to snap his photograph on the occasion.



to Bethlehem. At the meeting point passengers remained in their respective cars but both crews transferred from one car to the other. LVT withdrew St. Louis cars between 1914 and 1916, when ETC, then controlled but not absorbed by LVT, purchased at intervals a total of ten large arch roof steel double truck 214 Series cars for Allentown-Easton service from The J. G. Brill and Company. Under revised arrangements one ETC 214 Series car remained overnight at Fairview Car barn for the next day's first eastward trip. Between 1922 and 1949 Easton crews controlled all Easton-Bethlehem-Allentown operations from Easton Car barn.

Sale of St. Louis car No. 142 to Pottsville Union Traction Company (Eastern Pennsylvania Railways Company), Pottsville, Pennsylvania, during May, 1913, represented the thirty-eighth, and final, sale of St. Louis cars to other systems. Before shipment LVT's 14th Street Shops removed the right front and left rear steps and leaf doors and enclosed the space with wood panel construction and a large lift sash window; fastened a small wooden pilot beneath both platforms; installed destination sign-boxes in the upper portion of the front and rear center windows; and painted the body brown and applied No. 56 identification in yellow color.

LVT did not offer Chestnut Hill-Delaware Water Gap excursion service effective with the 1913 vacation season. New publicity suggested use of 800 Series Liberty Bell Limiteds from 69th Street Terminal, Upper Darby, to Allentown; St. Louis cars from Allentown to Portland via Slate Belt Electric Railway and Bangor and Portland Traction Company tracks; and Stroudsburg, Water Gap and Portland Railway cars from Portland to resort hotels. Allentown Division crews manned St. Louis cars assigned to two daily trips in both directions between Allentown and Portland.

Despite the two inconvenient changes from one car to another many Philadelphians patronized the service. During 1914 Allentown area theatres projected LVT's one thousand foot thirty-five millimeter publicity film "A Honeymoon Trip To Delaware Water Gap". Direct Allentown-Portland service ended with the close of the 1915 vacation season.

Effective April 1, 1913, LVT required a standard garb for all Philadelphia Division limited and local crews. Motormen wore a white and indigo striped overall and coat with nickel buttons and blue visor cap with silver piping and conductors wore the standard blue serge uniform with brass buttons and blue visor cap with gold pipings. A gold bar sewn on the left sleeve near the shoulder represented one year of service and a star five years. Some motormen had worn the overall and coat combination many months before standardization.

Easton Transit Company once again came into LVT's sphere of influence effective July, 1913, not by lease as in the early 1900's, but by LVT's purchase of controlling shares of stock. Although the Easton organization remained a separate entity, co-ordinated operations between both companies resulted.

During November, 1913, LVT, continuing efforts to establish unequalled Liberty Bell Route service, towed smashed St. Louis car No. 159 from Hecktown Car barn storage to 14th Street Shop to provide a base and framework for an elaborate private interurban car designated as No. 999. Mr. Harrison E. Fehr, R. P. Stevens' successor elected in July, 1913, planned the car as a charter service medium. However, until its conversion to passenger interurban car No. 812 in July, 1921, No. 999 operated more often as an official car conveying dignitaries and LVT officials than as a charter car.





Howard P. Sell Collection

No. 140, showing the 1914 paint scheme, setting in snow on 14th Street near Gordon Street, Allentown, in front of the Lehigh Valley Transit Company's paint shop and main office.



Elwood C. McElroy Collection

No. 166, a regular Slatington Limited assignee, setting in the 14th Street Car barn storage yard paralleling Gordon Street, Allentown, prior to an assignment, 1914.



Completion and opening of the 8th Street Bridge spanning Little Lehigh River valley separating South Allentown from Allentown's business district on November 18, 1913, altered all routes entering Allentown from the southerly directions. Henceforth, 8th and Hamilton Streets instead of 6th and Hamilton Streets served as terminus and starting point for all Philadelphia Division local and limited schedules. New double track construction extended westward from South 6th Street along St. John Street to South 8th Street and north on South 8th Street across the bridge to 8th and Hamilton Streets. Single track construction on Union Street between Lehigh and South 8th Streets connected the new and old routes. Most Allentown suburban routes served 8th and Hamilton Streets intersection but only a few terminated or started schedules at that point. LVT's ticket office also moved to the new location. Philadelphia Division local cars arriving at 8th and Hamilton Streets left Allentown over Union Street loop via Hamilton, South 6th, and Union Streets and entered the north entrance of the 8th Street Bridge at 8th and Union Streets. Philadelphia Limited and Emaus-Macungie cars however proceeded directly south on South 8th Street from 8th and Hamilton Streets intersection.

Shortage of rolling stock in 1914 required the rebuilding of damaged St. Louis car No. 146 for Philadelphia Division local service. No. 146 had set in Hecktown Car barn storage following the upset accident at Nazareth in 1906. Interior revisions included replacing of damaged woodwork, varnishing all woodwork, installation of a smoker partition, and installation of a toilet partition and dry hopper. Exterior adjustments included new wood panels and posts where necessary, installation of window panes, application of the latest paint scheme, and installation of lifeguards underneath both platforms.

Between 1902 and 1914 the Lehigh Valley Transit Company and its predecessor assigned St. Louis cars to various carbarns scattered throughout the system. Philadelphia Division assignees operated from the former Inland Traction Company carbarn in Souderton, for several years from a small carbarn erected north of Lansdale circa 1903, and between 1903 and 1913 from Brick Tavern Carbarn north of Quakertown; Easton-Nazareth cars from Butztown Carbarn during the lease of Easton Consolidated Electric Company systems; some Hellertown and Nazareth cars from Rittersville Carbarn; and those operating other schedules, the majority, to South Bethlehem, Bethlehem, Hellertown, Nazareth, Macungie, Easton, and Siegfried from South Allentown Carbarn between 1902 and 1907 and from 14th Street Carbarn between 1907 and 1914. Slatington Division St. Louis cars operated from both Allentown carbarns until completion of a small frame carbarn in Slatington on February 10, 1910.

Property improvements always remained a vital component of LVT programs. On April 11, 1914, a dismantling crew removed the small Rittersville Carbarn's walls, roof, and foundation but left the tracks for storage purposes, and on May 18, 1914, LVT opened spacious modern Fairview Carbarn in South Allentown. Effective immediately all cars assigned to routes emanating from Allentown, with only a few exceptions, operated from the new facilities. Carpenter, paint, mechanical, electric, and line departments, as well as LVT's main office, remained in various buildings at or near 14th and Gordon Streets until the 1938-1940 modernization program consolidated all units at Fairview Carbarn. Although LVT operation policies changed frequently, Souderton Carbarn continued as the starting point for Philadelphia Division local schedules until cessation of rail service in 1951.





Frederick E. Barber Collection

No. 143, with crew, setting on No. 0 track curve at Fairview Carbarn, Allentown, 1915.



Howard P. Sell Collection

Crew and Chestnut Hill bound Philadelphia Division local car No. 175, equipped with couplers and bar and tray lifeguards, awaits a northbound car in Toll Siding along the Chestnut Hill Branch south of North Wales, 1915.



Between 1914 and 1916 LVT once again revised St. Louis cars. Permanent semi-flush incandescent headlights installed on the dash beneath front and rear center windows replaced the portable carbon arc plug-in type; permanent wooden slat H-B lifeguards supported by steel rods, fastened directly underneath both platforms, replaced Providence fenders, locomotive type pilots, and bar and tray guards; and the half window screens, fastened to window posts, were removed from use although the fasteners remained attached for several years thereafter. At approximately the same time shop crews placed Baldwin equalizer bar trucks under No. 183 and installed different WH HL controls, termed "coffee boxes", in Nos. 174 and 185. Carpenters also removed the toilet compartment and facilities and re-installed a walkover seat in Philadelphia Division St. Louis cars so equipped. In some cars the smoker partition was removed, but in others the smoker section remained intact for several years. Minor operating equipment adjustments usually represented experimental projects conducted by the master mechanic's staff.

Prior to the installation of permanent bulb type headlights, Allentown Division employed an unusual method of maintaining and servicing headlights and signal-marker lamps. Early each morning passenger car crews deposited portable headlights and Adlake oil lamps at various designated street corners in Allentown and Bethlehem. Shortly thereafter the "lamp car", No. 127, an obsolete single truck passenger car with seats removed and a work bench installed, arrived at the scene. The motorman, actually the lamp repairman, gathered all equipment from the street corner and placed it inside the car. After all locations had been visited, the repairman operated the "lamp car" back to the carbarn and, working inside the car, filled oil signal-marker lamps, placed new carbons in head-

lights, and repaired faulty equipment. Early in the afternoon the "lamp car" returned required lamps and headlights to proper intersections. As daylight waned, night passenger crews collected and installed the proper illuminating and safety equipment on the cars. At the next day's sunrise the daily routine commenced once again.

Liberty Bell Route local passenger patronage, growing at a sizable but gratifying rate, required adjustments early in 1915. LVT's immediate action, utilizing available equipment, converted cars Nos. 170, 172, 173, 175, 176, 180, 181, 183, and 184 to train operations by installing lightweight Westinghouse couplers and SME air-brake equipment. On June 9, 1915, cars Nos. 172 and 173, equipped at only one end with couplers presumably removed from Easton Transit Company's No. 214, operated the first complete Allentown-Chestnut Hill trip as an experimental train. After each of the nine selected St. Louis cars had been equipped with two couplers, cars northbound from both Chestnut Hill and Norristown met at Wales Junction, coupled together, and operated as a train to Allentown. Southbound trains uncoupled at the junction and single cars returned to Chestnut Hill and Norristown. Train operations produced inconclusive results and a crew fatality following a coupling accident. LVT removed and placed couplers in storage in 1916. While couplers were in use, a car-wide bar underneath the coupler and a wooden tray near the trucks provided pedestrian safety features. When an object moved the bar, the tray dropped onto the track.

LVT acquired sole ownership of Quakertown Traction Company on December 31, 1915, and absorbed the entire property into its main organization. The arrangement did not alter Philadelphia Division policies.





Howard P. Sell Collection

Maintenance workers pose with Philadelphia Division local car No. 184, equipped with couplers and bar and tray lifeguards, on Chestnut Hill station trackage in Erdenheim, 1915.



Randolph L. Kulp Collection

No. 170, Allentown bound from Siegfried-Northampton, failed to negotiate the sharp Front and Arch Streets curve in Catasauqua and smashed through the Bryden Horseshoe Work's fence, 1916. Workers displayed normal interest when a photographer appeared.



## TWELVE 700 SERIES CARS PURCHASED

President H. E. Fehr and Superintendent Branson collaborating designed a large steel center entrance universal car intended for city, high speed local interurban, and by virtue of multiple unit controls and couplers, main line interurban limited train services. During spring and summer, 1916, Southern Car Company, High Point, North Carolina, built twelve cars to which LVT assigned the 700 Series classification.

While twelve 700 Series cars gradually assumed Allentown-Chestnut Hill hourly local service schedules during the interval extending from August 30, to September 30, 1916, it became apparent that only ten St. Louis cars, approximately half of the normal Souderton Car barn consist between 1902 and 1916, could conveniently handle Quakertown-Richlandtown assignments, half hour Lansdale-Norristown local schedules which met Allentown-Chestnut Hill cars at Lansdale, half hour Lansdale-Chestnut Hill schedules which met Liberty Bell Route Limiteds at Lansdale, and spare service and semi-utility assignments. Car No. 170, assigned regularly to the Philadelphia Division after being rebuilt in 1910, was transferred from Souderton Car barn roster to Fairview Car barn and received a regular assignment to the Allentown-Catasauqua-Northampton route. Cars Nos. 180 and 181 also transferred to Fairview Car barn and were assigned for several years to the Allentown-Bethlehem-Nazareth route and, later, to the Bethlehem-Nazareth schedule. Car No. 176, with baggage compartment intact, received spare car assignments over most Allentown suburban routes along with other St. Louis cars released by Souderton Car barn. During the transfer of ten St. Louis cars from Souderton roster to the Allentown roster, LVT transferred No. 154, usually an Allentown-Nazareth route as-

signee, to the Souderton roster where it remained until 1927.

Supposedly as an identity convenience measure for the Philadelphia Division dispatcher, relocated from Chestnut Hill station to a tower location at Wales Junction in 1912, LVT painted numbers on the left front roof corner at both ends of all 700 Series cars and two unidentified St. Louis cars. The numbering arrangement did not produce expected results and LVT discontinued the practice.

Between 1916 and 1928 700 Series cars' flexibility brought regular weekend and holiday assignments to Allentown-69th Street Terminal train service either as two cars trains or as the third car in a train with two 800 Series cars. During 700 Series cars' main line limited assignments St. Louis cars operated hourly local schedules in addition to half hour schedules from Friday evening until Monday morning or the evening preceding and the morning following a holiday. St. Louis cars assigned to Fairview Car barn replaced 700 Series cars as they arrived at 8th and St. John Streets from either Chestnut Hill or Souderton during the evening before either the holiday or weekend. On Monday or the day after a holiday St. Louis cars returned to Fairview Car barn and 700 Series cars once again assumed Philadelphia Division hourly local operations. This arrangement created the situation whereby 700 Series cars operated Allentown-Chestnut Hill local schedules on weekdays and main line limited service on weekends and holidays and St. Louis cars operated Lansdale-Chestnut Hill and Lansdale-Norristown schedules on weekdays and all Philadelphia Division local schedules on weekends and holidays. Souderton Car barn dispatchers also assigned available St. Louis cars to weekend and holiday main line local operations.

In spring, 1916, President H. E. Fehr proposed a one million dollar





Randolph L. Kulp Collection

"Special Car" No. 153, southbound from Slatington, entering Schnecks-ville after performing snow duty work, circa 1919.



Randolph L. Kulp Collection

No. 172, equipped with Baldwin curved equalizer bars trucks, setting in Fairview Car barn yard, Allentown, before undergoing rehabilitation processes of the 1920-1923 modernization program.



expenditure program which over a five year period would have double tracked the Liberty Bell Route between Allentown and Norristown; double tracked Easton - Bethlehem trackage; and built a new projection southward from Bethlehem to either Coopersburg or Quakertown to a junction with the Liberty Bell Route. World War I cancelled the entire project after double track reached Taylor Wharton plant west of Easton. If the plan had been completed, St. Louis cars would have operated local schedules over the Bethlehem-Coopersburg or Bethlehem-Quakertown section although Mr. Fehr seemed partial to 214 Series steel arch roof cars assigned to Allentown - Bethlehem-Easton limited schedules. LVT also had plans drawn for four all-coach cars similar to 800 Series coach-baggage cars to operate proposed Easton-Coopersburg or Easton-Quarkertown high speed limited schedules.

Between 1917 and 1923 LVT shops covered the exposed wooden bumper lip of most St. Louis cars with sloped steel sheets, allowing only a niche for the draw bar jaw, and replaced all Earll trolley catchers with the Ohio Brass Company type. In addition to the protective value against moist weather, steel sheets eliminated the common, but dangerous, practice of having as many as six passengers standing outside on the rear bumper of crowded cars. Passengers who rode on the bumper obligingly handed their fares through an open window to the conductor during collections. Philadelphia Division St. Louis cars were the last to have bumpers covered.

Lehigh Power Securities Corporation, a National Power and Light Company subsidiary, acquired control of LVT on July 19, 1917, and procured Electric Bond and Share Company's managerial service. As immediate visual evidence of management change, Electric Bond and Share

Company changed LVT's chrome green body, gold trim, yellow window sashes, red stained doors, and yellow roof colors to a bright red body, brown stained window sashes and doors, gold leaf trim, and sand color roof. Undercarriage, headlights, and bumpers remained black. Car No. 144, the first St. Louis to be repainted, while maintaining Allentown-Nazareth schedules confused patrons who, because of the color, often mistook it for the more familiar red painted Easton Transit Company cars operating Allentown-Bethlehem-Easton schedules.

World War I transportation requirements altered the St. Louis cars' status in suburban service. Expansion and increased production in Lehigh Valley area's diversified industries, especially trucks, tools, cement, and steel manufacture, required additional street railway equipment to transport a growing working force between homes and factories. Through finances granted by wartime federal agencies, LVT promptly purchased twenty-four lightweight center entrance multiple unit 900 Series cars from The J. G. Brill and Company, Philadelphia, Pennsylvania, in 1918 and fifteen more in 1919. Effective March, 1918, 900 Series cars replaced St. Louis cars in Catasauqua-Northampton service, various car types in Allentown-Bethlehem-South Bethlehem service, and sundry local runs in Allentown and Easton business district service. Although new cars once again eliminated St. Louis cars from several regular schedules, expanded Slatington, Nazareth, and Emaus-Macungie schedules absorbed additional cars.

After World War I ended, LVT, probably early in 1919, shopped combination car No. 176, removed the baggage compartment and revised both interior and exterior features to conform to the then current St. Louis car structure. No. 176 remained in Allen-





Elwood C. McElroy Collection

Lehigh Valley Transit Company photographed No. 170 as the "before" example for publicity purposes in conjunction with the 1920-1923 modernization program.



Elwood C. McElroy Collection

No. 143, the first St. Louis car converted to pay-as-you-enter (PAYE) type, represents the "after" example, 1921.



town suburban service until its return to Philadelphia Division local schedules for several years in the mid-1920's.

During April, 1919, LVT assigned to Souderton Car barn normally regular Slatington Division cars Nos. 161 and 164 to replace 700 Series cars during the interval in which 14th Street Shop removed the inner steel roof of each 700 Series car and installed a fibre board type. An unusual amount of roof fires in 700 Series cars, attributed to a narrow space between pole stand bolts and the steel roof, prompted LVT to adjust all cars. However, on March 5, 1920, before completion of the project, fire gutted No. 707 after the car struck sleet laden overhead wire which had fallen from spans along main line track near Rock Hill south of Sellersville.

Throughout the St. Louis cars' operating years crews and management recognized their unexcelled ability to maintain service during snow storms. At the first indication of a heavy snow fall or blizzard shop crews quickly substituted St. Louis cars for modern but less sturdy equipment at convenient points along various routes. While Fairview Car barn tracks overflowed with lightweight cars, St. Louis cars churned their way through snow which obliterated the tracks. When snows drifted and completely closed the routes, St. Louis cars pushed small single truck snow plows through snow banks almost as high or higher than the cars.

Loss of passengers to private transportation vehicles on the Quakertown-Richlandtown route after World War I required an economy adjustment. Between April 14, 1919, and mid-July cars Nos. 146 and 178 temporarily operated Quakertown - Richlandtown schedules as one man cars until 14th Street Shop permanently converted lightweight double truck cars Nos. 195 and 206 to one man service. No. 178

returned to Fairview Car barn but No. 146 remained at Souderton Car barn.

The most disastrous accident involving a St. Louis car occurred at 12:15 a.m., November 28, 1920, in Nazareth. Two passengers were killed and twenty other injured when car No. 138 was demolished in an upset accident at the bottom of Main Street hill and Easton Road. Only a few minutes previous the car had departed from Nazareth terminus for Allentown on the day's last scheduled trip. After air brakes failed during the descent, both crew members unsuccessfully applied the hand brake. No. 138 derailed at the right angle curve, sped across the highway into a corn field, and upset amidst dried corn stalks at almost the identical spot where No. 146 had been damaged under similar circumstances in 1906. By urging all passengers to assume a position as near to the floor as possible, the crew, according to passengers and observers, prevented greater loss of life.

### **LVT ROLLING STOCK MODERNIZED**

Between 1920 and 1923 LVT conducted a rolling stock rehabilitation program which modernized and re-vized most, but not all, St. Louis cars and sundry city and suburban type cars. In addition to body changes, during January, 1921, and continuing as standard practice, Miller trolley shoes, or slides, replaced trolley wheels on St. Louis and other type cars assigned to the Philadelphia Division. Actually trolley shoes had been in use on some Philadelphia Division cars as early as 1917. Later, a properly equipped "grease car" coated Philadelphia Division overhead wire with a lubricant to prevent friction wear or damage by the shoes.

Body revisions, both internal and external, designed primarily to create a modern pay-as-you enter type, officially termed PAYE by LVT and other systems, followed basic patterns, but





Randolph L. Kulp Collection

No. 143 pushing a small single truck snow plow through snow covered right of way in West Catasauqua along the Allentown- Siegfried route, 1921. The single truck sweeper followed and swept away residue.



Frederick E. Barber

Philadelphia Division local No. 154 operating southbound along original right of way paralleling Bethlehem Pike south of Coopersburg, 1924. The revised right of way, opened in 1925, cut through the fields several hundred feet westward.



not every St. Louis car received each revision: steel sheets fastened over wooden panel sides, nineteen cars; four mechanical outward folding doors and steps installed, left front and right rear operated from a post with lever at end of aisle and right front and left rear operated from post located left of the engineer's valve, and vestibule partitions and doors completely removed, twenty-seven cars; air operated rail sanding system in which sand flowed from boxes under right front and left rear side seats through a flexible tube to the rail, thirty-five cars; stove and heating ducts moved from right to left side from No. 1 end, twenty-seven cars; draw bar casting placed on bumper face, permitting enclosement of niche, thirty-one cars; one permanently installed electric Ohio Brass Company signal-marker light at each corner post near the roof, twenty-seven cars; roller destination sign moved from clerestory front wall to upper right front and left rear upper window sash, thirty-five cars; installation of roll curtains at bulkheads for convenience of motorman during night operations, thirty cars; milk white glass in upper window sash, six cars, side roof mats, or ladders, removed and motorman steps moved to right front and left rear corner posts and metal grab handles fastened on right front and left rear corner of roof for access to roof, thirty-five cars; and single glass shade reflectors and fittings placed in a row at intervals above the aisle, replaced chandelier fixtures, thirty-five cars. Philadelphia and Slatington Division St. Louis cars only were equipped with storage batteries to provide emergency power for the signal-marker light system. Electricians also relocated the main cable of most St. Louis cars from bulkheads to partitions separating third and fourth and ninth and tenth windows.

Early in 1921 No. 143 entered service as the first PAYE type St. Louis

car. LVT, as a publicity gesture to advertise the rehabilitation program, assigned No. 143 briefly to all routes. Cars No. 177 and 186, the first regular Philadelphia Division St. Louis cars converted to PAYE type, entered service on November 28, 1921.

The 1920-1923 rehabilitation program did not convert St. Louis cars Nos. 144, 158, 166, 169, 170, 173, 178, and 184 to PAYE type. Thereafter, until system-wide one man operations, LVT assigned non-PAYE St. Louis cars to regular Allentown-Slatington schedules and to occasional Philadelphia Division local service. Fewer local stops within Allentown, greater distances between numbered stops, and shorter total route distance between Allentown and Slatington permitted regular use of non-PAYE cars on the Slatington Division without affecting service quality. However, LVT usually assigned other routes' unassigned PAYE cars to Allentown-Slatington Sunday service.

The rehabilitation program also completed the covering of exposed bumper lips of all St. Louis cars except Nos. 170 and 178. No. 178 received the revision at a later date, but for no plausible reason, No. 170's bumpers remained uncovered.

Between 1920 and 1929 LVT frequently changed St. Louis car assignees to Souderton Carbarn. Conversion of units to PAYE type and schedule adjustments caused the rather constant numerical fluctuation of cars required. Souderton Carbarn records list, in addition to the Nos. 172 to 186 group, St. Louis cars Nos. 140, 143, 144, 146, 147, 149, 151, 153, 154, 158, 161, 164, and 169 as operating regular Philadelphia Division local schedules in the 1920's.

LVT, already the majority stock holder, leased Easton Transit Company for ninety-nine years effective March 1, 1922. During succeeding months LVT's monogram replaced





Frederick E. Barber

No. 178, equipped with milk white upper sash windows, approaching Hamilton Street from North 12th Street, Allentown, while operating Slatington Limited service, 1924.



Frank E. Gackenbach

No. 158, assigned to charter service, setting in Central Park storage yard, 1926. LVT did not alter its structure during the 1920-1923 modernization program.



ETCo identifications on passenger rolling stock and most work equipment. After lease date Allentown Division assigned several 600 Series and additional 900 Series cars to Easton Car barn. Four 900 Series cars had been assigned to the Easton roster in 1918. After legalities had been concluded, the Easton organization became Lehigh Valley Transit Company's Easton Division.

Beginning May, 1922, and continuing during subsequent months until Wales Junction-Chestnut Hill trackage abandonment, cars Nos. 153, 177, and 179 advanced to regular car status for Allentown-Chestnut Hill local service to replace center entrance cars Nos. 703, 706, and 710 which LVT had withdrawn from service for conversion to Liberty Bell Route chair car service. Effective 1923, and continuing until 1929, LVT supplemented regular limited service with chair car accommodations on two daily north and two south bound trips. Chair cars appeared as the second car in trains with 800 Series cars.

Collisions involving St. Louis cars with other LVT cars between 1910 and 1925 occurred at a rate which would be regarded normal considering high speed operations. The most serious, with no loss of life, involved No. 164 and work car No. F1 on the Slatington Division north of Siegersville before World War I; No. 174 and an unidentified Philadelphia and Western car near Norristown station in 1925; and No. 146 and No. 407, a single truck closed car, at Allentown Terminal Railroad depot in Allentown circa 1923. St. Louis cars suffered no worse than a stoved in end and were quickly returned to service after repairs.

LVT twice altered Liberty Bell Route operations during the mid-1920's. On September 2, 1925, limited and local operations moved from original right of way along the Allentown-Philadel-

phia highway (including part of the Bethlehem Pike) to new private right of way constructed between School Siding north of Center Valley to Rosedale north of Quakertown. Improved local and limited schedules and accommodations resulted. Less than one year later, on July 31, 1926, as the climax to a paving dispute, LVT abandoned Wales Junction-Chestnut Hill trackage and substituted autobus service. Practically one-third of Philadelphia Division local service ended with this surprising move. St. Louis car No. 180 recorded the final Wales Junction-Chestnut Hill railway assignment. LVT cancelled Lansdale-Norristown schedules operated by St. Louis cars and assigned 700 Series cars to a newly created Allentown-Norristown local schedule. St. Louis cars received various short intra-division local assignments which varied according to patronage requirements.

Effective with the adoption of one man operations by LVT in 1927 for all city and several suburban routes, PAYE type St. Louis cars required only the installation of an electric button fare recording system near the controls. St. Louis cars assigned to Philadelphia and Slatington Divisions' two man local operations retained an Ohmer fare register system along one side and the mechanical rod, strap, and dial system along the opposite side. For St. Louis cars assigned to two man suburban routes, LVT's mechanical staff devised and installed an electric fare recording system suspended from the ceiling above the aisle and set in door posts. Button panels, spaced conveniently throughout the car, provided immediate access for conductors collecting zone fares. As an aid to passengers as well as operators LVT installed in the lower right front and left rear windows a small longitudinal, illuminated, reversible sign lettered on one side "Pay As You Enter" and on the other "Pay As You Leave". Electricians, to provide a





Charles W. Houser, Sr.

No. 144, out of service at Fairview Car barn, shows modified 1927 PAYE conversion: Brill No. 27E1½ trucks; Adlake oil lights converted to electricity; and false mechanical steps at right rear and left front entrances.



Frederick E. Barber

No. 183 setting at 8th and Hamilton Streets intersection, Allentown, while motorman prepares for trip to Macungie via Emaus (Emmaus), 1929. Emaus and Macungie cars departed from the intersection on the inbound track, proceeded through a nearby trailing crossover to the outbound track, and continued southward over the 8th Street Bridge.



source of electricity to illuminate the signs, either completely removed the right front and left rear signal-marker lights or left the lights intact without a wire connection but used the wire to supply electricity to the reversible sign box lamps. Circa 1927, and continuing until abandonment of trackage on June 1, 1929, St. Louis cars operated between Slatington and Slate-dale as a supplement to the Allentown-Slatington schedule.

Shortly after one man service commenced, LVT introduced a modified paint scheme. A dark red varnished body, brown stained window sashes and doors; silver striping, medium size numbers, monograms, roof, poles, bumper, signal-marker lights, and head lights; and black undercarriage replaced the bright red, gold, and sand color combination. Accordingly, St. Louis cars appeared in the new style. LVT either painted upper sash glass brown on the inside or substituted a strong brown fibre board in the frame and eliminated Pantasote window shades.

Fairview Carbarn shops crews traded the Brill 27E1½ trucks from under cars Nos. 301 to 304 inclusive for Baldwin trucks underneath St. Louis cars Nos. 144, 158, 170, and 184, circa 1928. The 14th Street Shop quickly converted the four St. Louis cars to a PAYE type for one man city service by removing vestibule doors, but not the frame; installing mechanical doors and steps at right front and left rear entrances only; permanently enclosing left front and right rear entrances with double leaf door sections and removing the stationary step and fastening in its place a metal panel which resembled a mechanical step; and permanently placing at the four corner posts Adlake oil lamps which had been converted to electricity. After modifications had been completed, cars Nos. 166, 169, 173, and 178 remained as the only non-PAYE St. Louis cars. LVT assigned 301

Series cars to Allentown-Emaus-Macungie schedules along with St. Louis cars. Trading of trucks can be attributed to the stronger lightweight 301 Series bodies previously closed and converted to the conventional PAYE type.

Between 1928 and 1931 a St. Louis car maintained the one hour round trip Allentown-Northampton "Owl Service" schedule leaving Allentown daily at 1:00 a.m., 2:00 a.m., 3:00 a.m., and 4:00 a.m. Normally 900 Series cars required one and one-half hours for daily round trips up to and including midnight. On Sunday morning after completion of the last round trip at 6th and Hamilton Streets at 5:00 a.m., the crew and car proceeded to a newspaper agency on South 6th Street, received a capacity load of Sunday newspapers, and delivered them to distributors in Fullerton, Catasauqua, Northampton, Coplay, and Egypt before returning to Fairview Carbarn. During the school term the schedule required that the car, after completion of "Owl Service", proceed on week days directly to Center Valley on the Philadelphia Division and return to Allentown as the "School Car" for rural students attending Allentown High School. On Saturday and vacation week days the car returned directly to Fairview Carbarn.

The St. Louis car operating roster diminished by one in 1929 when No. 166 was removed from service and placed in storage at Fairview Carbarn after being damaged in a night upset accident in Coplay while returning to Allentown via Catasauqua from an Allentown - Slatington schedule. Car No. 153, damaged in a collision with line car No. R3 on the Slatington Division south of Siegersville during 1929, re-entered service somewhat revised. Revisions included replacement of small upper sash side windows with steel sheets, installation of lift sash windows in place of the drop





Daniel P. Grimes

Allentown bound No. 185 awaiting South Bethlehem bound car in Elliott Siding, Fountain Hill, along Allentown-Bethlehem-South Bethlehem route, 1931. St. Louis cars received regular assignments until LVT converted 900 Series cars to one man service between 1931-1932.



Francis J. Goldsmith, Jr., Collection

Norristown bound No. 162 passing through Center Square, north of Norristown, May 3, 1931, only a few weeks after St. Louis cars had replaced 700 Series center entrance cars in Philadelphia Division main line hourly local service. The station agent, as part of his duty, flagged the crossing.



sash type, sheathing wood body panels with sheet steel, and reshaping vestibule roofs into an odd higher crown. The rebuilding process virtually established No. 153 as physically equivalent to a new car.

Private automobile competition and widespread unemployment of eastern Pennsylvania's working force adversely affected LVT's services. Fewer patrons of Philadelphia Division local and limited services caused curtailment of short local schedules and withdrawal of all but one St. Louis car, No. 164, from Souderton Carbarn during 1929, 1930, and early 1931. Occasionally other St. Louis cars replaced either No. 164 or 700 Series cars during repair sessions. With the exception of a few assigned to Slatington Carbarn, St. Louis cars remained in open air storage at Fairview Carbarn yard in Allentown.

Purchase of ten modern 950 Series city-suburban cars in autumn, 1930, eliminated the Allentown-Bethlehem-South Bethlehem clockwise and counter clockwise loop service operated by two man 900 Series center entrance cars and introduced the Allentown-Bethlehem-Hellertown one man schedule, with alternating trips to Fountain Hill instead of Hellertown, and the Allentown-South Bethlehem-Bethlehem route. Eight 950 Series cars received the former assignments and St. Louis cars operated the latter schedules until LVT shops rebuilt most center entrance 900 Series cars into straight side one man front entrance-exit cars during 1931 and 1932.

Allentown-South Bethlehem-Bethlehem St. Louis cars operating through Salisbury Township occasionally sideswiped each other on curves or approaches to curves on double track originally engineered for small single truck cars in 1893. Right of way and rail conditions, a slight body list, truck maladjustments, and the operator's failure to heed warning signs sus-

pended from overhead wire spans at curves caused several minor accidents. A veteran motorman recalls an incident which involved a male passenger dozing comfortably at the rear of a South Bethlehem bound St. Louis car. As the car sideswiped the Allentown bound car, the force of impact and screeching sound startled the unfortunate passenger and sent him sprawling on his back onto the aisle floor.

Non-PAYE St. Louis car No. 173 probably operated its final revenue assignment on the Allentown-South Bethlehem-Bethlehem two-zone fare route during an emergency in summer, 1931. For several trips the operator laboriously conducted one man service with a two man type car. Fortunately the warm comfortable air permitted that the manually operated entrance and vestibule doors at the front platform remain open during operations, but, in order to prevent passengers from leaving or entering without paying fares, the rear platform and vestibule doors remained closed. At each stop the operator left the controls, assumed a position within the car underneath the fare register, and immediately collected and recorded fares while passengers either entered or departed.

## **ST. LOUIS CARS REPLACE 700 SERIES CARS**

Coincidental with adoption of one man service on January 25, 1931, for all but one Philadelphia Division local schedule, LVT replaced eight of nine 700 Series center entrance cars at Souderton Carbarn with PAYE type St. Louis cars Nos. 140, 143, 149, 151, 153, 162, 164, 172, 174, 175, 177, and 180. Constant motor failure forced No. 143's transfer back to Fairview Carbarn one month later. As a convenience for the operator to serve stops on both sides of the right of way, LVT shop crews relocated the left side door control post from the





Daniel P. Grimes

No. 137, returning from Emaus, halted by the traffic light at South 8th and Walnut Streets intersection, Allentown, one block south of the 8th Street station, 1931.



Howard E. Johnston

Shabby No. 185, operating on Northampton Street, Easton, enroute to Allentown as a substitute for a 214 Series car in limited service, November 1, 1933.



end of aisle position to a platform position near the control and, in addition, installed two two-leaf inward folding doors at all entrances of cars Nos. 149, 153, 162, 172, 174, and 177. Either cloth draw or roll curtains suspended from rods at both platforms eliminated window glare during night operations. In cars Nos. 153 and 177 only, LVT replaced seats with green plush walkover seats removed from 700 Series cars converted to deluxe limiteds and added conventional electric heaters along the unheated sides. Painters further modified the 1928 paint scheme by applying smaller size numbers. Effective April 26, 1931, the last two man Philadelphia Division local operation changed to one man, and Souderton Car barn sent the remaining center entrance 700 Series car to Fairview Car barn.

Non-PAYE St. Louis car No. 178, slowly deteriorating in Fairview Car barn yard following the introduction of one man service in 1927, entered 14th Street Shop for reconditioning and conversion to the conventional PAYE type in December, 1930. On February 3, 1931, refurbished No. 178 arrived at Souderton Car barn with vestibule partitions removed, inward folding mechanical doors and outward folding steps installed; sides sheathed with steel plates; bumpers covered; and Ohio Brass Company electric signal-markers lights installed on all four corner posts.

In late 1930 LVT had already planned the elimination of all large 800 Series two man Philadelphia Division limited cars and had commenced conversion of lighter 700 Series center entrance cars into straight side front entrance-exit high speed coach-lounge deluxe limited cars designed for one man service. Effective April 26, 1931, deluxe cars Nos. 703, 704, and 710 inaugurated two daily northbound and two southbound limited trips of one hour and forty minute duration between Allentown and 69th Street

Terminal. Enroute deluxe cars served station stops only. Car No. 702 joined the deluxe group in August, 1931.

Norristown station relocation in autumn, 1931, to accommodate P&W's new streamlined platform loading 200 Series "bullet" cars, eliminated the street level station on Swede Street in favor of a second story location near the north end of the viaduct over the Schuylkill River. In order that street loading St. Louis cars could conveniently serve the new station, P&W moved the third rail-overhead overlap section southward toward the station; built a walk, protected on both sides by steel fences, along the east side of the viaduct from the street level north end entrance to the station; and created an exit-entrance gap in the inner fence near the terminus of the overhead system and beginning of the third rail.

During November, 1931, Souderton Car barn sent No. 151 to Allentown shops for rehabilitation, but LVT, concerned about the rising number of unemployed industrial workers, suddenly cancelled the modernization of Philadelphia Division limited and local cars and halted work on No. 151 and conversion of Nos. 707 and 708 to deluxe limiteds. Work equipment towed and pushed all three unfinished cars from 14th Street Shop to the 13th and Gordon Streets storage yard where they remained for a few years until removal to Fairview Car barn yard. LVT continued deluxe schedules with four deluxe cars and revised chair car No. 706 until August, 1932. From August, 1932, until the introduction of 1000 Series interurbans, former Cincinnati and Lake Erie Railroad lightweight interurban cars, in February, 1939, a motley assortment of variously converted 700 Series cars operated one man Liberty Bell Route schedules of two hour duration which served both local and station stops.





Howard E. Johnston

No. 177 setting at Easton circle while substituting for a 214 Series car in Allentown Limited service, November 8, 1933. Single truck city car No. 308 served the College Hill-Freemansburg Road route.



Francis J. Goldsmith, Jr., Collection

Northbound Philadelphia Division local car No. 178 leaving Angle Siding north of Lansdale, June 5, 1936.



After LVT discontinued Liberty Bell Route deluxe limited service in August, 1932, and eliminated from the schedule trips leaving Allentown for 69th Street Terminal at 9:00 a.m., 11:00 a.m., 1:00 p.m., and 7:00 p.m., and corresponding return trips, a St. Louis car operated a newly created fast Allentown-Norristown local schedule which left Allentown station at 9:00 a.m. Passengers wishing to continue the journey to Philadelphia patronized connecting Philadelphia and Western Railway service between Norristown and 69th Street Terminal. The St. Louis car remained in the Norristown area and operated at least one return trip between Norristown and a nearby outlying community before returning to Souderton Car barn. This 9:00 a.m. local trip remained in effect until February, 1939.

Effective with Philadelphia Division local one man service inauguration in 1931, St. Louis cars operating southbound schedules discontinued use of the Union Street loop and the 8th Street Bridge in leaving Allentown. Instead, after proceeding east on Hamilton Street from 8th Street to 6th Street, the local cars followed the original route via South 6th, Lehigh, and South 6th Streets to trackage on St. John Street used by all routes, including the Liberty Bell Route, serving communities lying southeast, south, and southwest of Allentown. Local cars left 8th and Hamilton Streets before the limited cars and arrived first at the South 6th and St. John Streets intersection but waited until the southbound limited had passed before proceeding onto St. John Street via new special track work.

### **TRACKAGE ABANDONMENTS IDLE SEVERAL ST. LOUIS CARS**

Suburban line abandonments to Macungie from Emaus on May 31, 1929; Greenawalds-Slatington on July

31, 1931; Emaus Junction-Emaus on October 31, 1931; and Bethlehem-Nazareth on February 29, 1932, side-tracked several St. Louis cars. Dan Patch, or No. 156, operated the last Allentown-Slatington trip. LVT revealed its high regard for St. Louis cars in 1931 when the Bethlehem and Nazareth Street Railway Company stockholders planned to settle a financial dispute with LVT by seizing their property, leased to LVT in 1900; two St. Louis cars, probably Nos. 146 and 156, operating schedules; and sundry maintenance equipment stored in Hecktown Car barn. Before the stockholders could act, LVT replaced the St. Louis cars with 187 Series cars and removed all equipment from Hecktown Car barn. Shortly before abandonment of service 600 Series cars replaced 187 Series cars.

Quite unexpectedly LVT's paint shop painted the interiors of cars Nos. 179 and 186 apple green in 1932. Despite sharp contrast to the original glossy varnished interiors, passengers commented favorably. Exteriors of most city-suburban cars and Philadelphia Division St. Louis cars, almost devoid of the 1928 paint scheme, received one flat coat of red paint and application of small silver numbers and monograms, but no stripes.

During late 1932 and early 1933 Easton Division returned to Fairview Car barn excess cars Nos. 901, 906, 907, 914, 922, and 923, used in South Easton-Northampton Street service, and assigned in their place 214 Series cars with added alternating Easton-Bethlehem - Allentown limited trips. From 1931 until 1939 St. Louis cars Nos. 156, 164, 177, 182, 185, and 186 at one time or another, sometimes in pairs, received assignments to Easton Car barn as spares for 214 Series cars. In this capacity St. Louis cars frequently appeared in Easton-Bethlehem-Allentown limited and Easton rush hour services. LVT transferred No. 177 from Souderton Car barn to





John P. Scharle

No. 177, southbound in Brush Siding north of Norristown, operating Philadelphia Division extra holiday service, July 4, 1936.



Robert G. Lewis

Lansdale bound Philadelphia Division local car No. 172 entering the south end of Broad Siding near former Wales Junction, August 13, 1936.



Easton Carbarn roster on March 22, 1933, and reversed the procedure on May 24, 1934.

In 1933, as a forerunner to a future scrap program, LVT dismantled St. Louis car No. 166 and sundry type cars which had been setting idle in Fairview Carbarn yard and had deteriorated beyond repair. These obsolete cars had clogged yard trackage.

Car No. 175, assigned to Souderton Carbarn in January, 1931, proved to be a troublesome unit from an operating point of view. An exceptional number of electrical equipment failures during main line local service caused its semi-retirement from active service in October, 1931. Other than infrequent spare service assignments, No. 175 set idle inside Souderton Carbarn structure until LVT returned it to outdoor storage at Fairview Carbarn on January 1, 1934.

Between 1934 and 1935 LVT conducted a major scrap program which eliminated from the roster various type cars and St. Louis cars No. 172, irreparably damaged in a collision with Liberty Bell Limited No. 812 on the 8th Street Bridge on October 9, 1934, and partially deteriorated and idle St. Louis cars Nos. 146, 147, 151, 154, 169, 173, 175, and 176. Other idle St. Louis cars set in Fairview Carbarn yard while No. 140 set outdoors with obsolete freight cars behind Souderton Carbarn. For no other reason than an experimental economy move, LVT removed Baldwin MCB2X trucks from under No. 165 and installed Baldwin curved equalizer trucks from No. 621, another car scrapped during the same program. No. 165 appeared only in Allentown-Bethlehem area rush hour service after the adjustment.

#### **SEVERAL IDLE ST. LOUIS CARS REACTIVATED AND RECONDITIONED**

Heavy snow storms during winter 1935-1936 caused considerable dam-

age to electrical equipment of newer and lighter cars to the extent that LVT searched storage tracks for older serviceable cars and reactivated St. Louis cars Nos. 137, 140, 144, 161, 181, 183, and 185. The paint had deteriorated on most cars to the point that numbers could hardly be detected. Several enameled pipe stanchions placed conveniently between seats bolstered No. 185's sagging clerestory roof. St. Louis cars Nos. 158, 170, and 184 received the inglorious system-wide assignment to "salt car" service. As such, rock salt was loaded loosely in each car's interior over seats and in the aisle. Track, operating, and maintenance personnel operated the cars over city and suburban trackage practically twenty-four hours per day and scattered salt over switches to insure proper functioning. After spring arrived, LVT shop men set No. 184's body on supports near Fairview yard loop trackage to serve as a tool shed for the track gang.

LVT's failure to paint all extra passenger rolling stock and most work equipment between 1932 and 1936 may be attributed to two main factors: first, decline in passenger and freight income; and second, contemplated conversion from electric car to auto-bus operations. Only interurban cars assigned to regular Liberty Bell Route limited schedules and most regular city cars received any sort of necessary maintenance attention.

Moderate financial recovery and more work available to Lehigh Valley area's industrial workers in late 1936 and early 1937 required additional transportation equipment to render efficient service. LVT reactivated and repainted St. Louis cars and other types which had been either used during winter months or which had set in idle storage five years or more. To quickly accomplish the task, all available shop employees, equipped with a brush and paint bucket, in the





Francis J. Goldsmith, Jr., Collection

Southbound Philadelphia Division local car No. 174 passing Souderton bound Nos. 803 and 807, a two car train, in Marshall Siding, Norristown, August 13, 1936. The former limited cars served U. S. Works Progress Administration charter service for several months during 1936.



Francis J. Goldsmith, Jr., Collection

Philadelphia Division local car No. 177, setting at Center Valley waiting room along revised Liberty Bell Route, prepared for return trip to Allentown, September 7, 1936.



shop, in the yard, and even along the right of way painted, not always with finesse, car bodies having little or no paint protection. Hastily repainted cars remained unstriped. Painters stenciled either large or small numbers and monograms in either silver or gold paint at proper body locations. St. Louis cars Nos. 140, 150, 156, 161, 162, 164, 165, 177, 178, 179, 182, and 186 received a flat paint coat and silver monograms and small numbers and Nos. 137, 143, and 183 flat paint and gold monograms and medium size numbers. The same program changed LVT's standard color scheme for all regular service city and suburban cars from a red varnished body; silver roof, small numbers, bumpers, poles, and headlights; and black undercarriage to a red body; cream window sashes; silver roof and poles; gold striping, small numbers, and monograms; and black bumpers, headlights, and undercarriage. No. 153, the only St. Louis car ever to be adorned in the new style, left LVT's paint shop on September 12, 1936.

As late as spring, 1936, rather than retire a car equipped with comfortable plush seats and partial electric heating as well as being a favorite car among operators, LVT shop men fastened steel plates over the deteriorated wooden panel sides of car No. 177. In April, 1936, Souderton Carbarn returned No. 180, a chronic motor failure victim, to Fairview Carbarn storage. However, receipt of a contract with the United States government returned shabby No. 180 to the Philadelphia Division effective October 30, 1936, to transport Works Progress Administration workers to projects near Souderton. During the special assignment No. 180 remained at Souderton Carbarn. Autobus service replaced electric railway car accommodations in January, 1937, and No. 180 again returned to Fairview Carbarn storage. Previously, during summer and autumn, 1936, former

heavy steel-wood Philadelphia Division limited cars Nos. 803, 805, and 807 carried W.P.A. workers between Norristown and government projects near Telford.

Souderton Carbarn, after using No. 149 regularly in local service for six years, returned it to Fairview Carbarn as junk on March 4, 1937, and received in its place wooden body car No. 143. Allentown dispatchers assigned No. 149 to spare city and rush hour service for several weeks thereafter.

In April, 1937, Souderton Carbarn sent No. 174 back to Fairview Carbarn apparently to storage, but the out of service assignment lasted only a short time. No. 174 returned to Souderton Carbarn's roster during June to serve as a substitute while Fairview Carbarn's mechanical staff completed the installation of "dead man" apparatus to controls of Philadelphia Division St. Louis cars. After the cars had been equipped with the safety device, No. 174 returned to storage in July, 1937. As No. 174 returned from Souderton, No. 186, previously an Easton Division assignee, received the "dead man" apparatus installation and joined the Philadelphia Division roster. LVT policy requiring assignment of the best conditioned St. Louis cars to Philadelphia Division local service caused constant shuffle of equipment between Allentown and Philadelphia Divisions during the 1930's.

LVT, by July 1, 1937, had added "dead man" equipment to controls and braking systems of cars Nos. 140, 143, 149, 153, 162, 164, 174, 177, 178, and 186. A Pennsylvania Utility Commission rule required the safety installation on all one man local, interurban, and freight cars operating Liberty Bell Route services. Master mechanic William Klein designed the apparatus. An air piston placed near the brake valve, when extended, struck an extension added to the brake





Francis J. Goldsmith, Jr., Collection

Philadelphia Division local car No. 149 loading passengers at Hatfield station while serving the Norristown-Hatfield intra-division schedule, September 26, 1936.



Francis J. Goldsmith, Jr., Collection

Southbound Philadelphia Division local car No. 149 setting in front of Lansdale station while enroute to Norristown, September 26, 1936.



lever and moved the lever to emergency position. At the same time sand flowed to the rail. A second piston forced the control reset switch to "off" position. Only full brake application or depression of the foot pedal prevented air pressure from activating both pistons.

As of January 1, 1938, LVT's St. Louis car roster listed twenty-five units, or one-third of the original order: sixteen cars assigned to Fairview Carbarn, Nos. 137, 144, 149, 150, 156, 158, 161, 165, 170, 174, 179, 180, 181, 183, 184, and 185; one at Easton Carbarn, No. 182; and eight at Souderton Carbarn, Nos. 140, 143, 153, 162, 164, 177, 178, and 186. Nine cars, Nos. 144, 149, 158, 170, 174, 180, 181, 184, and 185, all showing marked deterioration affects from the elements, had seldom been assigned to service after winter, 1935-1936. A few operated for the last time on Romper Day during August, 1936, to convey school children from their respective playgrounds to the annual city-wide program held in spacious Allentown Fair Ground. During 1938 and until complete withdrawal in 1939 the St. Louis car complement at Souderton Carbarn varied little.

Despite a sagging clerestory roof, cars Nos. 137 and 179 received daily Allentown area rush hour assignments during 1938 and No. 177 operated regular Philadelphia Division local schedules. The dilapidated appearance of these and other cars in similarly poor condition brought expected unfavorable public comments, but the public had not been informed that LVT's managers had already arrived at a decision.

### **LVT'S 1938-1940 MODERNIZATION PROGRAM**

Engineers engaged by Electric Bond and Share Company in 1938 evaluated Lehigh Valley Transit Company's

position as a street railway operator and recommended retention of Allentown and Bethlehem city trackage and rail routes to Greenawalds, Northampton, South Bethlehem, Hellertown, and Easton; retention of the Liberty Bell Route; conversion of Easton city street car lines to autobus service; reconditioning of LVT's newer rolling stock; and acquisition of newer second-hand street railway cars to replace older and obsolete cars, including all St. Louis cars.

LVT designated Easton Division 214 Series cars as replacements for St. Louis cars in Philadelphia Division local service after abandonment of Easton city rail routes and acquisition and reconditioning of modern lightweight interurban cars for the short Allentown - Bethlehem - Easton route. However, after No. 217's low mechanical steps failed to clear the device which automatically lowered or raised third rail shoes of limited cars at the north end of the Philadelphia and Western Railway's Norristown viaduct during a trial test, LVT assigned 214 Series cars to Fairview Carbarn for spare city service and requested other cars for Philadelphia Division local service. The Utility Equipment Company, scrappers of obsolete LVT cars and suppliers of second-hand cars, acquired six of seven former Steubenville, East Liverpool and Beaver Valley Traction Company (Pennsylvania and Ohio) lighter weight suburban cars to which LVT assigned the 430 Series classification. If the 214 Series cars had been suitable for Philadelphia Division local service, St. Louis cars would have remained in service several months longer. Reconditioned 214 Series cars were not available for service until spring, 1940.

From late 1938 until August, 1940, LVT Vice President and General Manager William B. McGorum directed the suggested modernization program.





Francis J. Goldsmith, Jr., Collection

Newly painted No. 140, assigned to extra service, setting opposite the main entrance of Allentown Fair Ground on September 26, 1936, during "Fair Week".



Francis J. Goldsmith, Jr., Collection

Faded No. 156, "Dan Patch", preparing to leave the Allentown Fair Ground's main entrance at North 17th and Chew Streets, while serving Allentown Fair traffic, September 26, 1936. Part of Allentown General Hospital is visible in the background.



## ST. LOUIS CAR SERVICE FINALE

St. Louis cars in operating condition received service assignments during 1939 until LVT transferred them from the active roster to the scrap list. The strong right front corner post of No. 143 splintered beyond repair when struck by steel interurban car No. 710 on March 21, 1939, in an accident at Rink Siding, Norristown, and forced the car's withdrawal from service earlier than anticipated. In February, 1939, Easton Division returned shabby No. 182 to Fairview Carbarn for scrap. On April 11, Souderton Carbarn sent No. 140 to Fairview Carbarn for scrap; April 12, No. 162; October 4, No. 153; October 15, Nos. 164, 177, and 186; and October 22, 1939, the last St. Louis car in regular Philadelphia Division local service, No. 178. Between May and September, 1939, while LVT retired several St. Louis cars from Liberty Bell Route local service, interurban cars Nos. 700, 701, and 711, also listed for scrap, shared local services with whichever St. Louis cars were still assigned to the Souderton Carbarn. When LVT assigned the six 430 Series cars one at a time to Souderton Carbarn roster between September 14, and November 7, 1939, 430 Series, 700 Series, and remaining St. Louis cars shared local assignments for a brief two month period. No. 701 escaped the scrap program and remained in passenger service until 1951 and Nos. 700 and 711, minus trucks, provided storage facilities in Fairview Carbarn yard for several years thereafter.

LVT assigned No. 164 to Easton Carbarn during February, 1939, to replace No. 182 as a spare car until the new 1100 Series Easton Limited cars (reconditioned former Dayton and Troy Electric Railway interurban cars) replaced 214 Series cars. No. 164 served Fairview Carbarn's roster after its return from Easton until a brief re-assignment to the Philadelphia Division in late summer, 1939.

Nos. 137, 156, 161, 165, and 183, the only Allentown Division St. Louis cars available in 1939, operated Allentown, Bethlehem, Hellertown, Greenawalds and Northampton rush hour service until LVT assigned them to the scrap list. Car No. 137 received an advertising car assignment for several weeks in May, 1939. As such, shop crews fastened a solid frame, with back, approximating billboard dimensions on both sides of the body. A local theatre used the facility to advertise film attractions. No. 137 was operated through Allentown, Bethlehem, and Northampton business areas during the assignment.

Early in November, 1939, No. 177, no longer listed on Souderton Carbarn roster, performed the last St. Louis car assignment to any part of the Philadelphia Division when, in a Sunday emergency situation, the Allentown dispatcher assigned it to the Allentown-Center Valley schedule for one round trip only as a replacement for a disabled 430 Series car. During November and December, 1939, and possibly early January, 1940, former Philadelphia Division St. Louis cars Nos. 153, 164, 177, 178, and 186 joined the remaining Allentown Division St. Louis cars in performing Allentown area rush hour assignments.

In late December, 1939, No. 177 received an assignment for several weeks within Fairview Carbarn yard. Storage of city cars, newly painted mountain ash scarlet and picador cream, on a track perpendicular to shop and yard tracks created a confused background for operators at controls of cars leaving either yard or shops and opposing incoming newly painted cars on the inbound track between the yard and a facing switch leading to the outbound track about one hundred feet from the entrance. A collision involving a car leaving and another which had already entered the yard changed the storage ar-





Francis J. Goldsmith, Jr., Collection

No. 179, assigned to Allentown Fair extra service, moving southward on North 17th Street enroute to Allentown's business district with weary home-bound fair attendees, September 26, 1936.



John P. Scharle

Northbound Allentown-Center Valley local car No. 186 passing dead-end Lehigh Siding, Lanark, along the Philadelphia Division, May 1, 1938. Charles W. Houser, Sr., now a member of the Lehigh Valley Chapter, N.R.H.S. and a Director-at-Large for the national organization, is at the controls.



rangement. To provide a contrasting background, LVT, in need of storage until completion of the modernization program, placed red painted St. Louis car No. 177 and interurban cars Nos. 700 and 711 along the outer track paralleling the inbound - outbound track.

St. Louis cars, like Judas goats, throughout the modernization program aided in the demise of their own kind as well as other type cars. LVT shop personnel helping the utility company employees frequently used St. Louis cars to shift, with tow bars, inoperable cars from yard trackage to the scrapping track.

### **DISPOSITION OF ST. LOUIS CARS**

Utility Equipment Company, working on the Fairview Carbarn dismantling track located southwest of the barn and yard, scrapped St. Louis cars as follows: from September through December, 1938, Nos. 144, 149, 150, 158, 170, 174, 179, 180, 181, and 185; during 1939, Nos. 140, 143, 156, 165, 182, 183, and 184; during February, 1940, Nos. 161 and 162; on August 7, 1940, No. 137; and finally on August 17, 1940, Nos. 164 and 177, the last St. Louis cars on LVT property. During July, 1940, the equipment company sold bodies of No. 178 for use as a farm utility building south of Quakertown; No. 186 as a diner south of Sellersville; and No. 153 as a storeroom in Hokenau north of Allentown. All bodies have been dismantled during intervening years. The equipment company had hoped to sell many bodies through newspaper advertisements, but only a few buyers appeared.

From early 1940 until disposal Nos. 137, 153, 164, 177, 178, and 186 had set in the far northeast corner of Fairview Carbarn yard.

### **CONCLUSION**

As dying embers of the last St. Louis car turned to ash in the brush along Fairview Carbarn dismantling track, an interesting, or perhaps the most glorious, era in Lehigh Valley area electric railway transportation ended. From a wintry day, March 11, 1902, after one year in idle storage, until an undetermined winter day in 1940, St. Louis cars operated almost thirty-nine complete years of combined interurban, suburban, and city passenger service as well as frequent menial tow car and snow removal assignments over all Lehigh Valley Transit Company trackage. They served the Philadelphia Division in one capacity or another for more than thirty-eight consecutive years. Ironically, despite many attempts to oust them in whole or part, St. Louis cars remained in service as long as all but four of forty-eight intended replacements purchased between 1905 and 1912, and these had been completely rebuilt in the late 1920's and early 1930's.

The bulky St. Louis cars never reached their intended termini at busy city hall square in Philadelphia or on New York City's glittering Broadway, but the versatile dependable service which they daily rendered under sundry conditions lingers pleasantly in the memory of Lehigh Valley area folk, Lehigh Valley Transit Company personnel, and faithful patrons of the famous Liberty Bell Route.

**END**





John P. Scharle

Southbound Philadelphia Division local car No. 177, operating the 9:00 a.m. Allentown-Norristown trip, travelling along "Three Mile Run" north of Perkaspie, May 6, 1938. Hightension lines have cast morning shadows across the car.



Stephen D. Maguire

No. 186, normally in Philadelphia Division local service, standing unassigned in Fairview Car barn yard, Allentown, July 23, 1938.



## ST. LOUIS CAR ROSTER

(Standard Gauge Dimensions)

- 137 Scrapped; Fairview Carbarn; August 7, 1940
- 138 Demolished; Upset at Nazareth; November 28, 1920
- 139 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 140 Scrapped; Fairview Carbarn; April 14, 1939
- 141 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 142 Sold; Pottsville Union Traction Co. (East Penn Rys.); May, 1913
- 143 Scrapped; Fairview Carbarn; April 4, 1939; Damaged in crash with No. 710 in Rink Siding, Norristown, March 21, 1939
- 144 Scrapped; Fairview Carbarn; December 13, 1938
- 145 Sold; Easton Consolidated Electric Company; April 1, 1903 (sold to Toronto and York Radial, Circa 1905)
- 146 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 147 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 148 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 149 Scrapped; Fairview Carbarn; October 7, 1938
- 150 Scrapped; Fairview Carbarn; October 31, 1938
- 151 Scrapped; Fairview Carbarn; 1934-1935 scrap program; out of service, November 13, 1931
- 152 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 153 Body sold for storeroom, Hokendauqua, Penna.; July 20, 1940
- 154 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 155 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 156 Scrapped; Fairview Carbarn; December 18, 1939
- 157 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 158 Scrapped; Fairview Carbarn; October 20, 1938
- 159 Damaged, 1903; body used for construction of private interurban car No. 999, November, 1913
- 160 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 161 Scrapped; Fairview Carbarn; February 11, 1940
- 162 Scrapped; Fairview Carbarn; February 11, 1940
- 163 Sold; Oakland Transit Consolidated, California; April 16, 1904
- 164 Scrapped; Fairview Carbarn; August 17, 1940
- 165 Scrapped; Fairview Carbarn; April 14, 1939
- 166 Wrecked in upset, 1929, Coplay; Scrapped; Fairview Carbarn; 1933
- 167 Sold; Easton Consolidated Electric Company; April 1, 1903 (sold to Toronto and York Radial, circa 1905)
- 168 Sold; Easton Consolidated Electric Company; April 1, 1903 (sold to Toronto and York Radial, circa 1905)
- 169 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 170 Scrapped; Fairview Carbarn; October 20, 1938
- 171 Sold; Easton Consolidated Electric Company; April 1, 1903 (sold to Toronto and York Radial, circa 1905)





Leroy S. Dietrich — E. Everett Edwards

Southbound Philadelphia Division local car No. 186 crossing Susquehanna Street at Aineyville Junction, Allentown, July 28, 1938. At this point LVT's South Bethlehem route branched eastward behind the storeroom (former LVT waiting room).



William J. Rugen

No. 165 setting in Fairview Carbarn yard, Allentown, November 13, 1938. The body sets on the Baldwin curved equalizer bar trucks formerly under city-suburban car No. 621.



## Wide Gauge Dimensions

- 172 Scrapped; Fairview Carbarn; 1934-1935 scrap program. Damaged in crash with interurban car No. 812 on 8th Street Bridge; October 9, 1934
- 173 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 174 Scrapped; Fairview Carbarn; December 13, 1938
- 175 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 176 Scrapped; Fairview Carbarn; 1934-1935 scrap program
- 177 Scrapped; Fairview Carbarn; August 17, 1940
- 178 Body sold for farm utility building, near Quakertown; July 22, 1940
- 179 Scrapped; Fairview Carbarn; October 31, 1938
- 180 Scrapped; Fairview Carbarn; October 7, 1938
- 181 Scrapped; Fairview Carbarn; October 25, 1938
- 182 Scrapped; Fairview Carbarn; February 21, 1939
- 183 Scrapped; Fairview Carbarn; April 4, 1939
- 184 Scrapped; Fairview Carbarn; March 11, 1939
- 185 Scrapped; Fairview Carbarn; October 25, 1938
- 186 Body sold for diner, south of Sellersville; July, 1940
- 187 Sold; Trenton, Lawrenceville and Princeton RR, New Jersey; December, 1902
- 188 Sold; Fonda, Johnstown and Gloversville RR, New York; June 6, 1903
- 189 Sold; Danville Street Railway and Light Co., Illinois; September 30, 1903
- 190 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 191 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 192 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 193 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 194 Sold; Danville Street Railway and Light Co., Illinois; September 30, 1903
- 195 Sold; Fonda, Johnstown and Gloversville RR, New York; June 6, 1903
- 196 Sold; Fonda, Johnstown and Gloversville RR, New York; June 6, 1903
- 197 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 198 Sold; Citizens Electric and Gas Co., Iowa (?); March 31, 1903
- 199 Sold; Oakland Transit Company, California; March 21, 1904
- 200 Sold; Fonda, Johnstown and Gloversville RR, New York; June 6, 1903
- 201 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 202 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 203 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 204 Sold; Oakland Transit Consolidated, California; March 21, 1904
- 205 Sold; Fonda, Johnstown and Gloversville RR, New York; October 31, 1902
- 206 Sold; Fonda, Johnstown and Gloversville RR, New York; October 31, 1902
- 207 Sold; Fonda, Johnstown and Gloversville RR, New York; October 31, 1902
- 208 Sold; Fonda, Johnstown and Gloversville RR, New York; October 31, 1902
- 209 Sold; Trenton, Lawrenceville and Princeton RR, New Jersey; November 9, 1901
- 210 Sold; Trenton, Lawrenceville and Princeton RR, New Jersey; November 9, 1901
- 211 Sold; Trenton, Lawrenceville and Princeton RR, New Jersey; November 9, 1901





Howard E. Johnston

No. 222, former Easton Transit Company 214 Series limited car, and St. Louis car No. 182 halted at Country Club Junction on the Easton-Bethlehem route for a "photo stop", November 13, 1938. The North Jersey Chapter, N.R.H.S., chartered both cars for a special tour.



Richard H. Steinmetz

St. Louis car No. 182 and Nos. 209 and 206, two original Easton Transit Company cars, setting side by side in Easton Carbarn's storage yard, 1938. The photograph compares the bulkiness of St. Louis cars with the smaller double truck suburban-interurban cars introduced in the early 1900's.



## ST. LOUIS CAR ASSIGNMENTS

### Allentown Division

Allentown-Bethlehem-Hellertown	1902-1910
Allentown-South Bethlehem-Bethlehem	1902-1910, 1931-1932
Allentown-Bethlehem-Easton	1902-1904, 1913-1914
Allentown-Emaus-Macungie (Emaus-Macungie abandoned 1929)	1902-1931
Allentown-Bethlehem-Nazareth, Bethlehem-Nazareth	1902-1931
Allentown-Catasauqua-Northampton-Siegfried	1902-1918
Allentown-Slatington	1902-1931
Slatington-Slatedale	1927-1929
Easton-Nazareth	1902-1904
Allentown-Bethlehem-Nazareth-Bangor	1903-1904, 1910-1912
Allentown-Bethlehem-Nazareth-Bangor-Portland	1913-1915

### Philadelphia Division

Allentown-Chestnut Hill Limited	1902-1912
Allentown-Chestnut Hill Local	1912-1916, 1922-1926
Allentown-Norristown Local	1915-1916, 1931-1939
Quakertown-Richlandtown	1912-1919
Chestnut Hill-Delaware Water Gap Excursion Limited	1908-1912
Sundry inter-town local schedules	1902-1939

### Easton Division

Easton-Bethlehem-Allentown (spare service only)	1931-1939
Easton city routes (spare service only)	1931-1939

### Miscellaneous

Rush hour, spare, and semi-utility intra division services	1902-1940
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David H. Cope

Philadelphia Division local car No. 153 arriving at the 8th and Hamilton Streets intersection in Allentown from Center Valley while limited car No. 710, a former deluxe type, awaits departure time for a regular trip to 69th Street Terminal, Upper Darby, 1939.



John P. Scharle

Southbound LVT No. 1000, former Cincinnati and Lake Erie Railroad inter-urban No. 125, undergoing tests prior to service introduction and No. 153, operating a regular southbound local schedule, await signal clearance in Emmaus Junction Siding, February 5, 1939. The cars represent the last and first types which operated LVT's Philadelphia Division limited schedules.



## ST. LOUIS CAR TECHNICAL INFORMATION

(revisions and alterations applicable only to cars retained by LVT)

BUILDER	—St. Louis Car Company, St. Louis, Missouri, 1901.
BODY	—Passenger; wood and steel frame with wood panel sides and steel sheet ends; quartered oak interior; clerestory canvas covered wood deck roof; drop platforms. Nos. 137 to 171; 45 ft., 6 in. long; 8 ft., 6 in. wide; 12 ft. high on trucks. Nos. 172 to 211; 45 ft., 6 in., long; 9 ft. wide; 12 ft. high on trucks.
TRUCKS	—1901; St. Louis No. 23, 33 in. wheels. 1907; Baldwin MCB2X, 34 in. wheels, retained on most cars. 1909; spoked wheels, Nos. 176 and 181, briefly. 1909; Brill No. 27E1½, No. 142. 1912-1915; Baldwin curved equalizer bar trucks, Nos. 172, 174, and 183, retained. 1928; Brill No. 27E1½, Nos. 144, 158, 170, and 184, retained. 1935; Baldwin curved equalizer bar trucks from No. 621, No. 165, retained.
HEADLIGHTS	—1901; portable carbon arc. 1914; semi-flush incandescent.
CONTROLS	—1901; WH K14. 1907; WH L4, No. 1 end only, Nos. 172 to 179, gradually replaced with HL. 1910; WH HL, all cars retained by LVT with exceptions. 1915; WH HL small "coffee box" type, Nos. 174 and 185, retained. 1937; "dead man" apparatus, Nos. 140, 143, 149, 153, 162, 164, 174, 177, 178, and 186, retained.
MOTORS	—1901; WH56, 55 horsepower. 1907; WH304, 90 horsepower.
BRAKES	—1901; Christensen air brakes and St. Louis hand brake. 1907; Westinghouse straight air, retained. 1915; SME air brakes, Nos. 170, 172, 173, 175, 176, 180, 181, 183, and 184 for train operation. Re-equipped with straight air, 1916.
COUPLERS	—1915; Westinghouse, Nos. 170, 172, 173, 175, 176, 180, 181, 183, and 184, removed 1916.
WEIGHT	—Nos. 137 to 171; 58,140 pounds. Nos. 172 to 211; 61,400 pounds.
SEATING	—1901; 52, 26 double rattan walkover seats (one seat removed in winter for stove installation prior to 1911). 1911; 46, retained.
HEATING SYSTEMS	—1901; Milwaukee pattern coal stove in center along left side. 1907; Cooper coal stove at front right side, hot water pipe system along both sides, Slatington and Philadelphia Divisions' cars only. 1911; coal stove at front right side, blower forced hot air through ducts along floor on the right side only. 1921; coal stove and ducts moved to left side, most cars, retained. 1931; supplemental electric heating along right side on cars Nos. 153 and 177, retained.
TROLLEY CATCHERS	—1901; Wilson. 1907; Earll; 1917; Ohio Brass Co., retained.





Howard P. Sell

Southbound Center Valley local No. 153 halted on the crest of Lehigh, or South, Mountain at Summit Lawn while the operator communicates with the Philadelphia Division dispatcher, February 5, 1939.



David H. Cope

Philadelphia Division local car No. 140 setting at the north end of Philadelphia and Western Railway's Norristown viaduct over the Schuylkill River, 1939. Trolley poles are being changed in preparation for the northbound trip.



- FENDERS
- 1901; Providence.
  - 1907; home made lifeguard No. 166 only.
  - 1907; steam locomotive type pilots, Nos. 172 to 186, all removed by 1915.
  - 1914; H B Lifeguards, retained.
  - 1915; Bar and tray, Nos. 170, 172, 173, 175, 176, 180, 181, 183, and 184, during coupler use, removed, 1916.
- DESTINATION SIGNS
- 1901; metal signs under center end windows; different color for each route.
  - 1907; wide illuminated cloth Hunter roll signs in front and rear clerestory wall, metal supplementing sign under right front window.
  - 1921; narrow illuminated cloth roller sign in right front and left rear upper sash window, retained.
- WHISTLES
- 1901; foot gong and 5 in. chime air whistle underneath each platform, operated by pins in floor.
  - 1907; either a 5 in. verticle or 10 in. horizontal whistle on right side of center end window on roof, Philadelphia Division cars only.
  - 1910; 10 in. horizontal whistle above right front and left rear windows, all cars.
  - 1921; chime whistles underneath platforms, retained.
- SIGNAL LIGHTS
- 1901; Adlake oil in holder beneath right rear and left front window on dash.
  - 1907; Adlake oil, individual flag and lantern sockets near roof on left front and right rear corner posts.
  - 1912; Adlake oil in combination flag and lantern sockets near roof on all four corner posts.
  - 1921; electric Ohio Brass Company signal-marker lights on all four corner posts, retained; storage batteries provided emergency power in Philadelphia and Slatington Division cars.
  - 1927; Adlake oil lamps converted to electricity, Nos. 144, 158, 170, and 184.
- PAINT SCHEMES
- 1901; "Broadway Yellow" varnished body with cream trim from window sills to roof; light brown stained window sashes and doors; cream striping; large silver numbers with black outline; tan roof; black bumpers, poles, undercarriage, and trucks. L. V. T. Co. in large letters on sides and numbers added to ends, 1905.
  - 1907; medium chrome green varnished body; red stained window sashes and doors; gold striping, LVT monograms, and medium size numbers; dull red roof, briefly, then tan; black bumpers, poles, undercarriage, and trucks.
  - 1912; same as 1907 except yellow sashes with false wood grains and yellow roof.
  - 1917; bright red varnished body; brown stained window sashes and doors; gold leaf striping, monograms and medium size numbers; sand color roof; black bumpers, poles, undercarriage, headlights, and trucks.
  - 1928; dark red varnished body; brown stained window sashes and doors; brown board or painted upper sash glass; silver striping, monograms, medium size numbers, bumpers, roof, poles, marker lights, and headlights; black undercarriage.
  - 1931; same as 1928 except small size numbers.





Samuel P. Worthington

Philadelphia Division local car No. 143 concluding a southbound schedule on the Philadelphia and Western Railway's Norristown viaduct at the exit-entrance gap of the inner fence, February 11, 1939. LVT's overhead electric system ended and P&W's third rail system began at this point.



Randolph L. Kulp

Southbound Philadelphia Division local car No. 153 arriving at 6th and St. John Streets intersection from Allentown's business district, April, 1939. Southbound local cars waited at this point until southbound limited cars had passed. The Good Shepherd Home is in the background.



PAINT SCHEMES  
(continued)

1932; dark flat red body; silver or gold monograms and either small or medium size numbers; silver marker lights; red or stained window sashes; brown doors; tan or silver roof; black bumpers, poles, headlights, and undercarriage; retained.

1936; dark red varnished body; cream body above window sills and cream sashes; red doors; silver roof and marker lights; gold leaf striping, monograms, and small numbers; black bumpers, poles, headlights, and undercarriage, No. 153 only.

MILK WHITE GLASS  
IN UPPER SASH

—1923; Nos. 146, 147, 154, 169, 172, and 178 (removed in 1928).

STRUCTURAL REVISIONS

—Steel sheets over wood side sheathing, 1920-1936; Nos. 137, 140, 146, 149, 150, 153, 154, 156, 161, 162, 165, 166, 172, 176, 177, 178, 179, 182, 183, 184, and 186.

—Four outward folding mechanical doors and steps, one door post at both ends of the aisle and near engineer's valve on both platforms, vestibule partitions removed, PAYE type, 1920-1931; Nos. 137, 140, 143, 146, 147, 149, 150, 151, 153, 154, 156, 161, 162, 164, 165, 172, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 185, and 186.

—Two mechanical doors, right front and left rear, door posts at motorman's position, vestibule doors only removed, 1927; Nos. 144, 158, 170, and 184.

—Original double leaf hand folding doors, vestibule partitions, and stationary steps retained; Nos. 166, 169, and 173.

—Baggage entrance on right side only, 1910, restored to passenger body, 1919; No. 176 only.

—Covered bumpers, work begun in 1917 and completed in 1931; all cars on LVT roster except No. 170.

—Toilets, installed in 1905 and removed in 1917; Nos. 146 (1914), and Nos. 172 to 186 inclusive.

—Smoking compartment, installed in 1907 and removed by 1923; Nos. 146 (1914), 158, 161, 166, 169, and 172 to 186 inclusive.

—Left side mechanical door post at motorman's position for Philadelphia Division local service, installations completed between 1931 and 1937, Nos. 140, 143, 149, 151, 153, 162, 164, 172, 174, 175, 177, 178, 180, and 186.

—Inward folding four leaf doors, 1931; Nos. 149, 153, 162, 172, 174, 177, and 178.

—Lift sash windows and high crown vestibule roof, 1929; No. 153.

—Relocation of draw bar socket and pin from top to face of bumper, completed between 1920 and 1923; all cars retained by LVT except Nos. 158, 166, 169, 170, and 173. Top position draw bar and pin at one end and face at the other; No. 164.





David H. Cope

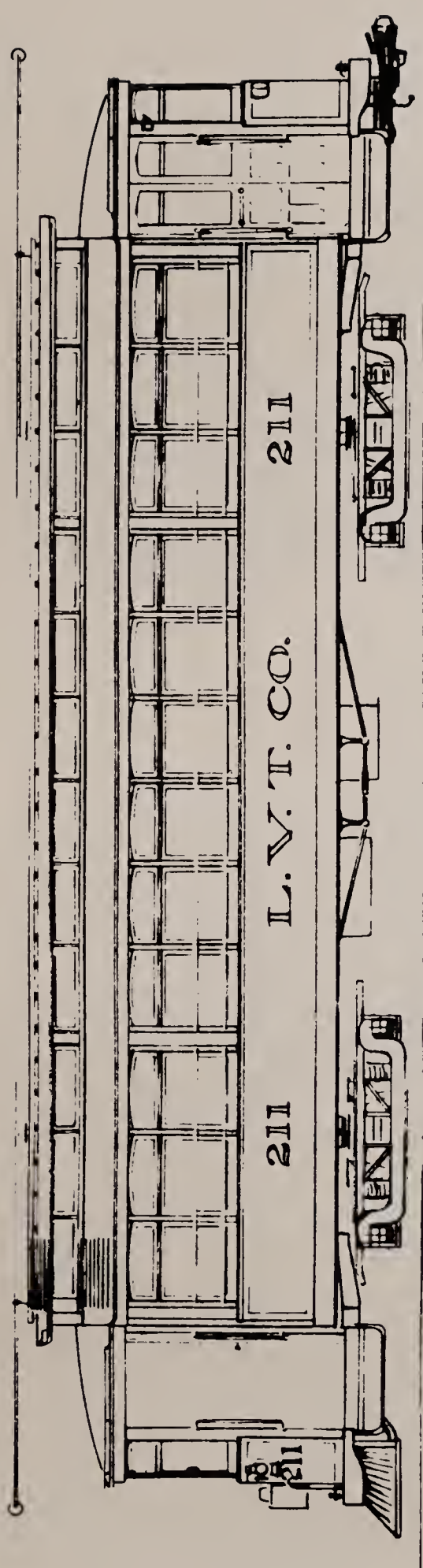
Philadelphia Division local car No. 140, northbound from Center Valley, entering Emmaus Junction Siding, Allentown, April 2, 1939. The Philadelphia Division officially began at the road crossing in the background and the former Emaus-Macungie rail route branched westward.



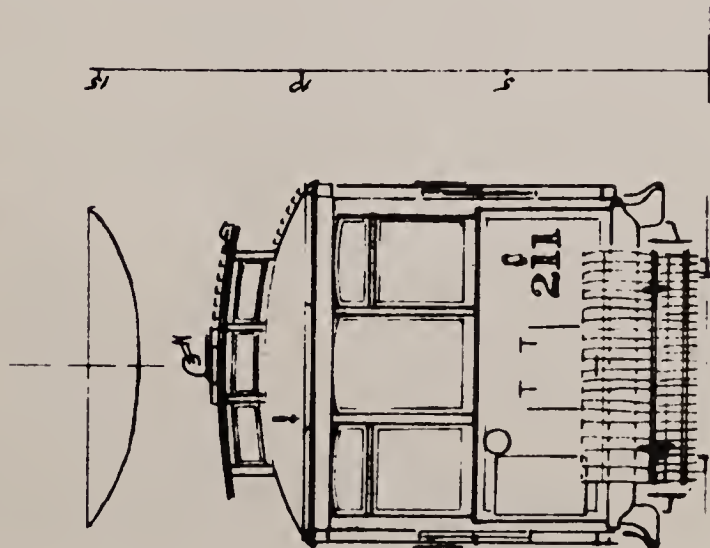
David H. Cope

Philadelphia Division local car No. 140, operating the northbound Center Valley-Allentown local schedule, crossing South Allentown viaduct spanning Trout Creek meadows and Reading Company's East Penn Yard and main line, April 2, 1939.





0' 10' 20' 30' 40' 45'



Composite drawing of original St. Louis car structure and subsequent adjustments, 1910 - 1916.  
 End view — original arrangement, 1901 - 1914.  
 Side view — locomotive pilot installation, 1907 - 1914; Philadelphia Division cars only.  
 — Coupler installation, 1915 - 1916; Philadelphia Division cars only.





Samuel P. Worthington

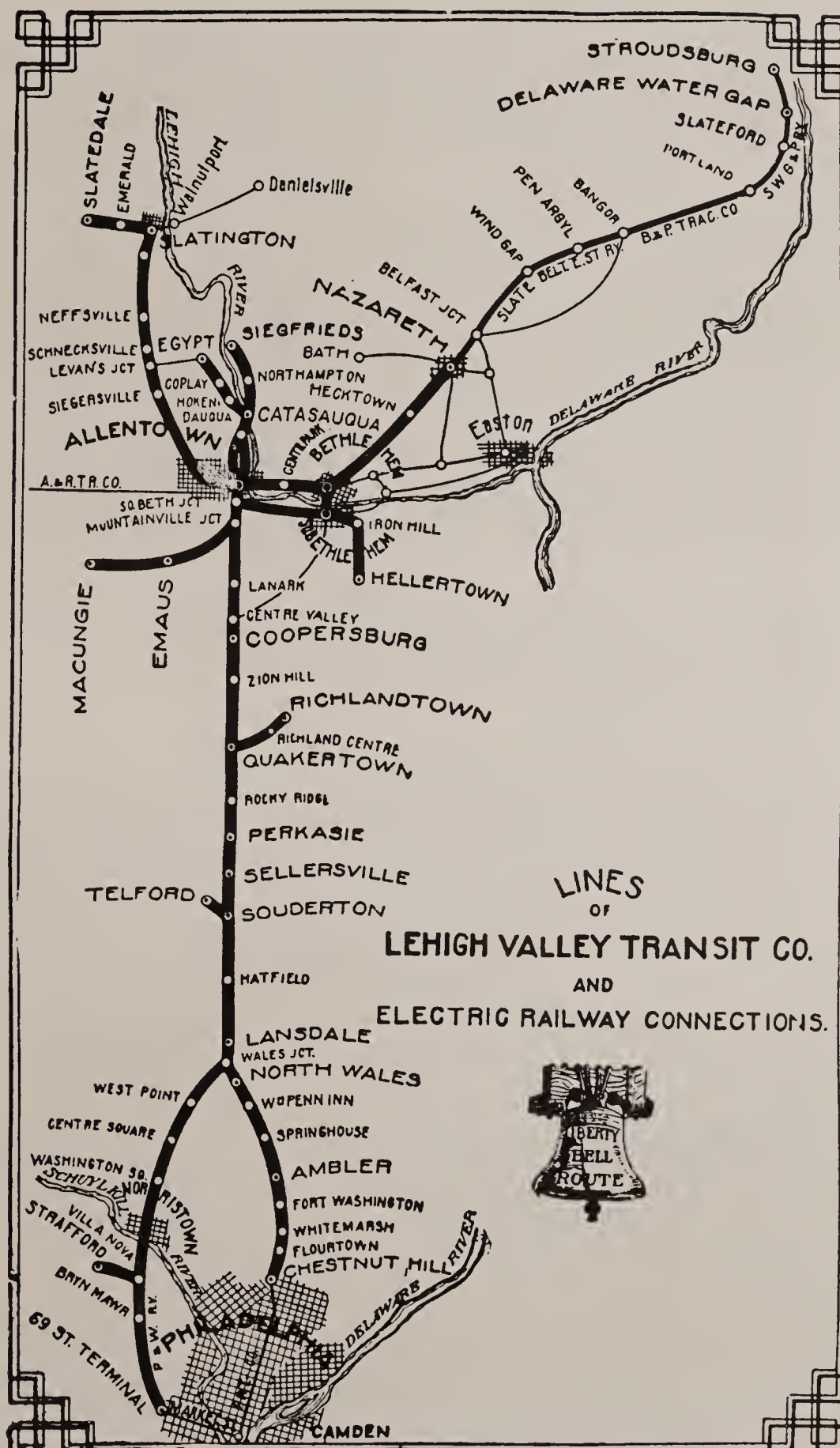
Philadelphia Division local car No. 177, enroute to Norristown, passing through Orvilla, south of Hatfield, beyond LVT's interchange with the Reading Company's Bethlehem Branch, May 2, 1939. The clerestory roof sag is quite noticeable.



Howard P. Sell

No. 137, halted in the siding on Gordon Street west of North 14th Street, Allentown, served its final assignment as an advertising car, May 3, 1939.









Leroy S. Dietrich — E. Everett Edwards

No. 161 laying over at Minsi Trail Junction, Bethlehem, until shift changes at Bethlehem Steel Company's Bethlehem Plant, May 12, 1939.

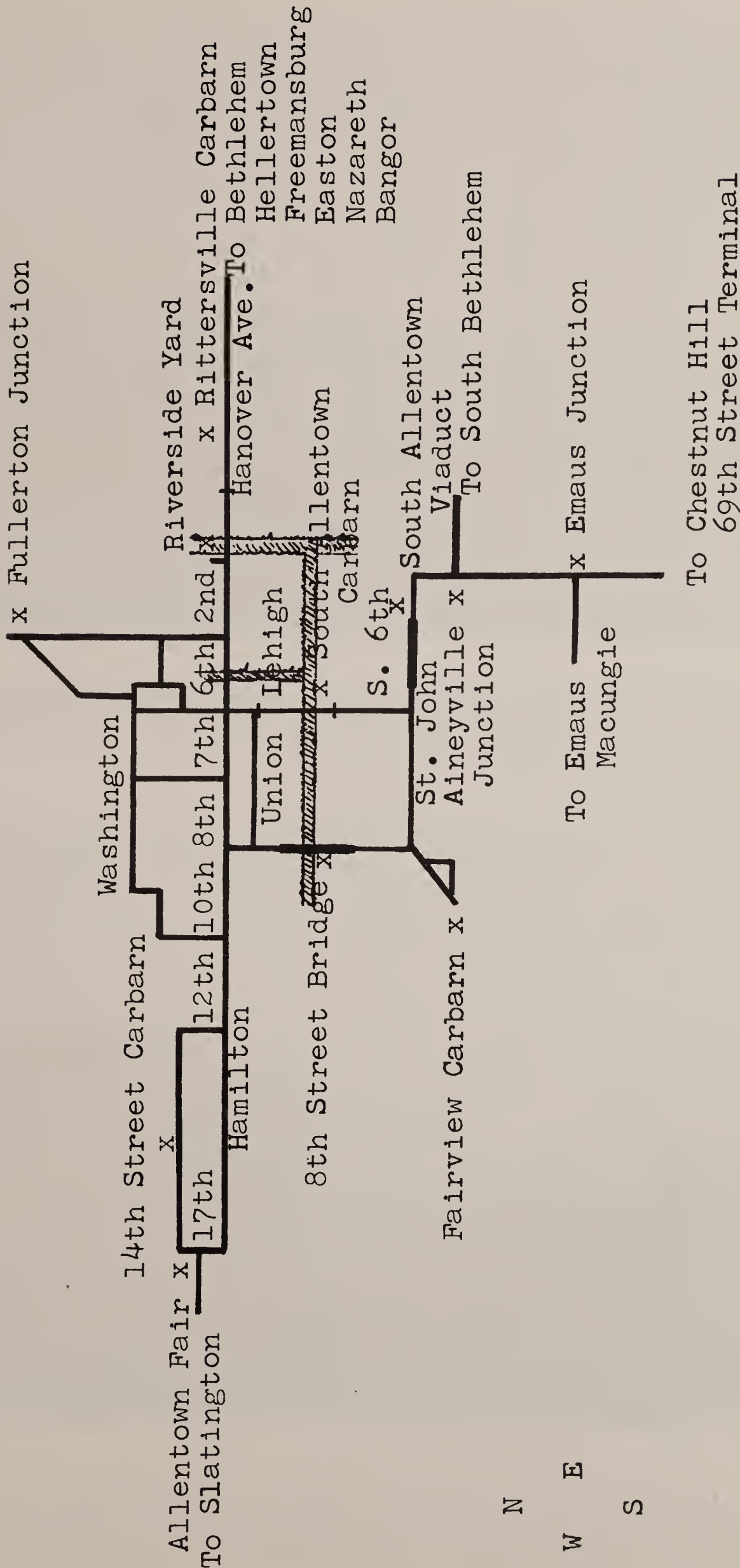


Leroy S. Dietrich — E. Everett Edwards

No. 164 setting in Central Park storage yard, formerly Rittersville Car-barn, August 21, 1939. LVT used the yard, located near the Allentown-Bethlehem boundary line, to store rush hour cars ending morning and beginning evening extra service in either West Bethlehem or East Allentown as well as extra service assignees during the park season.



To Siegfried  
 Northampton  
 Catasaqua  
 Egypt  
 Coplay







**E. Alfred Seibel**

Philadelphia Division local car No. 178 northbound on the South Allentown viaduct, September 23, 1939. No. 178 was the last St. Louis car in Philadelphia Division local service.



**Randolph L. Kulp**

No. 178 setting in Fairview Carbarn yard, Allentown, shortly after being removed from the Philadelphia Division's roster, November 16, 1939. The destination sign indicates a recent assignment to Bethlehem rush hour service. No. 161 sets next in line.



**ST. LOUIS CARS SOLD TO OTHER ELECTRIC RAILWAY SYSTEMS  
IN THE UNITED STATES**

**1901-1913**

**CITIZEN'S ELECTRIC AND GAS COMPANY**

**March 31, 1903, LVT No. 198**

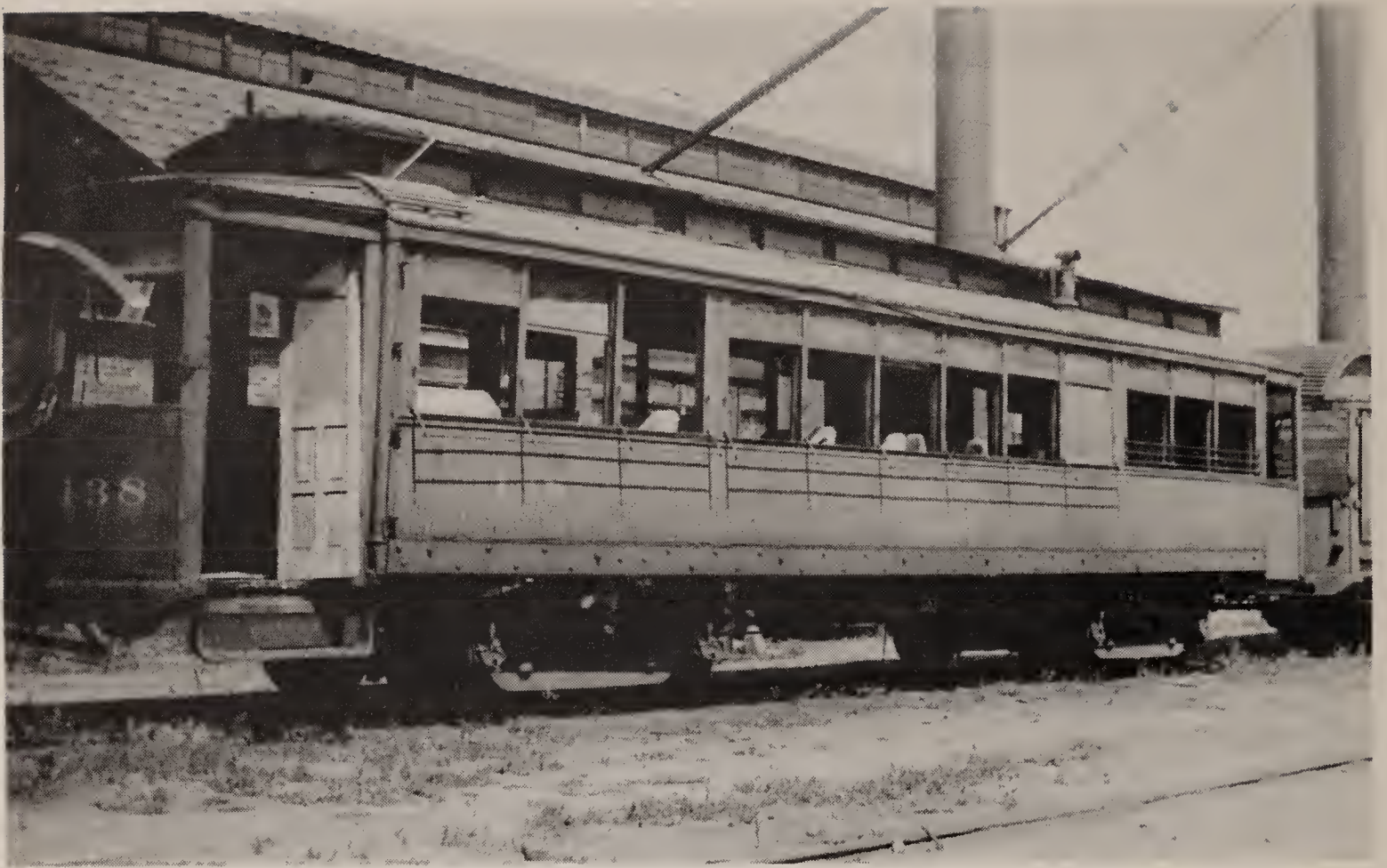
Location of purchaser not known, but the car may have become No. 10 of the Centerville, Albia, and Southern Railway in Iowa. (Refer to **The Palimpsest**, May, 1954, published by The State Historical Society of Iowa)

**DANVILLE STREET RAILWAY AND LIGHT COMPANY — Illinois  
(Illinois Traction Company)**

September 30, 1903, LVT Nos. 189  
194

Identified as Nos. 138 and 139 by Illinois Traction Company.





William C. Janssen

Illinois Traction No. 138, out of service, setting in Decatur yard, 1929.



Charles Gammell Collection

Illinois Traction No. 139 at Rige Farm, Illinois. Undoubtedly the car sneaked into the scene.



**EASTON CONSOLIDATED ELECTRIC COMPANY — Pennsylvania**  
**(Easton, Palmer, and Bethlehem Street Railway)**

April 1, 1903, LVT Nos. 145  
167  
168  
171

EP&B numbers not known. Cars were sold circa 1905 to Toronto and York Radial Railway (Canada), later Toronto Transportation Commission.





William C. Bailey

Toronto Transportation Commission car No. 141 setting at Eglinton Car House, August 30, 1928. The former Lehigh Valley Traction car came to Toronto, Canada, via the Easton, Palmer, and Bethlehem Street Railway Division of Easton Consolidated Electric Company circa 1905.



William C. Bailey

Interior view of Toronto Transportation Commission No. 141 reveals seating arrangement changes.



**FONDA, JOHNSTOWN, AND GLOVERSVILLE RAILROAD — New York**

October 31, 1902, LVT Nos. 205  
206  
207  
208

June 6, 1903, LVT Nos. 188  
195  
196  
200

FJ&G Nos. 75 to 82 inclusive. Used on Schenectady Division at first and later on Fonda Division.





William R. Gordon Collection

Fonda, Johnstown, and Gloversville Railroad No. 75 and crew posed momentarily for a photograph in Amsterdam, New York.



E. Alfred Seibel

Fonda, Johnstown, and Gloversville Railroad No. 77, a former Lehigh Valley Traction Company St. Louis car converted to a combine, setting in Gloversville, New York, carbarn yard, June 16, 1935.



## **OAKLAND TRANSIT CONSOLIDATED — California**

**(Oakland Traction Consolidated, September 30, 1904; various companies;  
finally Key System Transit Lines)**

March 21, 1904, LVT Nos. 190

191

192

193

197

199

201

202

203

204

April 16, 1904, LVT Nos. 139

141

148

152

155

157

160

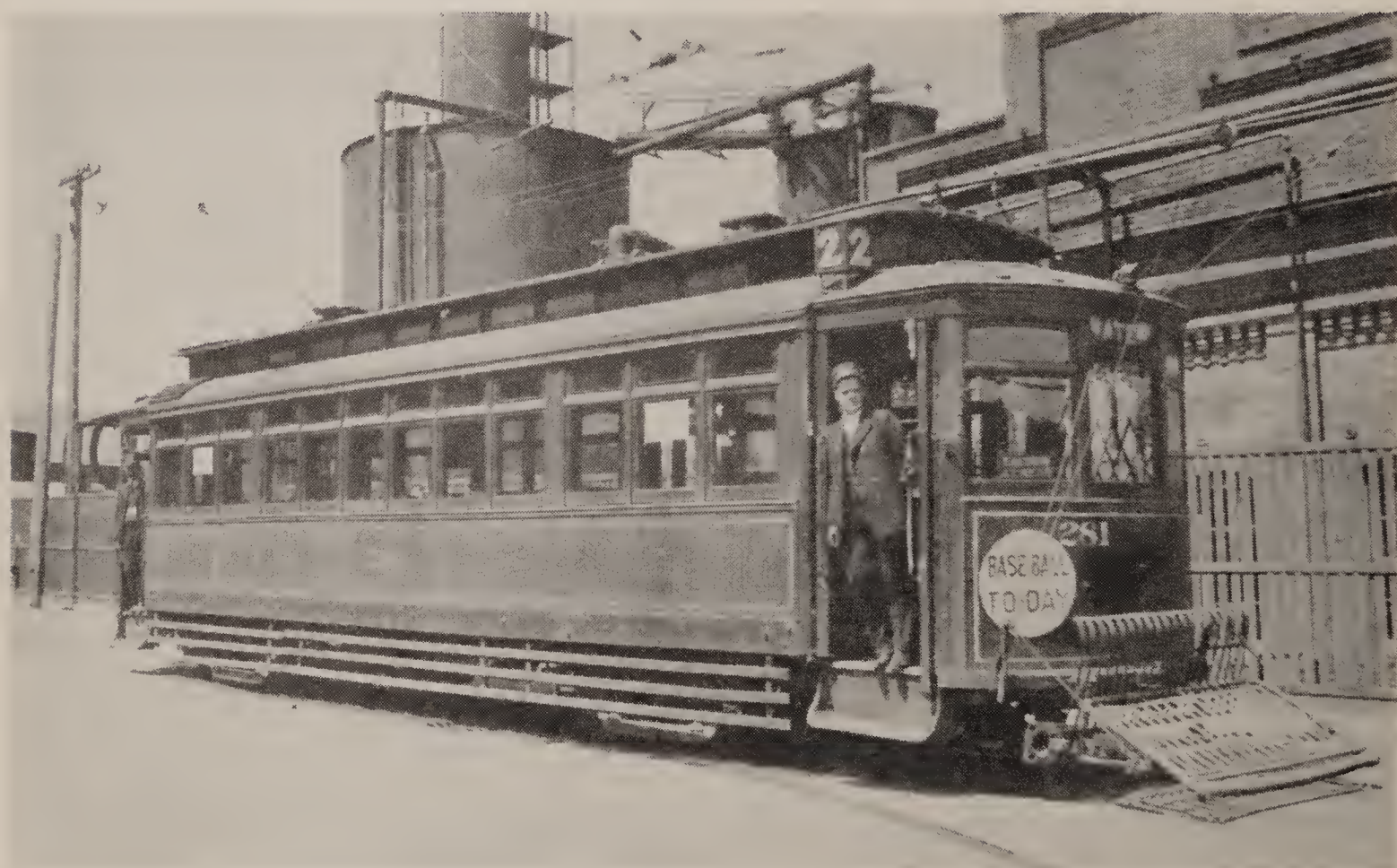
163





Erle C. Hanson Collection

Oakland Traction No. 257 on Claremont Avenue line of the Key Division, 1909. At this early date there had been only a few adjustments to the original structure as built for the Lehigh Valley Traction Company.



Erle C. Hanson Collection

No. 281 halted at Sandard Oil Refinery, Richmond, California, on the Oakland-Richmond line, 1914. Side guards cover trucks and undercarriage equipment.



**Lehigh Valley  
Traction numbers**

139  
141  
148  
152  
155  
157  
160  
163  
190  
191  
192  
193  
197  
199  
201  
202  
203  
204

**Oakland Traction  
numbers, 1904**

251  
252  
253  
267  
255  
256  
250  
254  
257  
258  
259  
260  
261  
262  
263  
264  
265  
266

Oakland Traction Company Nos. 250, 254, and 257 to 266 were rebuilt for train service in 1906 and renumbered Nos. 488 to 499, Nos. 490 to 495 being trailers. Oakland Traction No. 251, renumbered No. 271 in 1917, has been the property of Bay Area Electric Railroad Association since October 10, 1946.

In Oakland the former LVT cars were referred to as the "Lehighs".





Elmer Cumming Collection

A four car train of former Lehigh Valley Traction Company St. Louis cars assigned by Oakland Traction Consolidated to the San Francisco, Oakland, and San Jose Consolidated Railway for use on Key Division. The photo shows Nos. 496 (motor), 495 and 494 (trailers), and an unidentified motor setting in Emeryville, 1906.



Gerrard Graham Collection

Oakland Traction Nos. 499 and 488, both motor cars, setting in Oakland. Twelve former Lehigh Valley Traction Company cars, termed the "Lehighs" in Oakland, were identified as Nos. 488-499 from 1906 until 1914. Their structure and equipment were altered for multiple unit interurban service.



## **BAY AREA ELECTRIC RAILROAD ASSOCIATION — California**

The Bay Area Electric Railroad Association purchased Key System Transit Lines car No. 271, former Lehigh Valley Traction Company St. Louis car No. 139, on October 10, 1946. BAERA operated No. 271 in rail fan specials over Key System trackage until the final excursion on November 17, 1957. Since April 19, 1958, No. 271 has been sitting in outdoor storage in the Oakland Terminal Railway's yard in Oakland, California.

During 1961 No. 271 along with other BAERA owned street railway cars will be moved to an operating museum site at Rio Vista Junction, Solano County, California, on the Sacramento Northern Railway. The new location is situated forty-seven miles north and west of the Oakland Terminal Railway's Oakland yard.





Harre W. Demoro

Bay Area Electric Railroad Association car No. 271, former LVT No. 139, dwarfed alongside of Key System Lines unit No. 182 in Oakland yards, May 22, 1956.



Addison H. Laflin, Jr.

Bay Area Electric Railroad Association car No. 271, formerly Key System Lines No. 271, operating on "C" line in Piedmont, California, November 17, 1957, during a special trip.



**POTTSVILLE UNION TRACTION COMPANY — Pennsylvania**  
**(Eastern Pennsylvania Railway Company)**

May, 1913, LVT No. 142

PUT No. 56





Howard E. Johnston

Pottsville Union Traction Company No. 56, former LVT No. 142, operating southward from Pottsville along Schuylkill River, negotiates a curve north of Schuylkill Haven, Pennsylvania, in the 1920's.



Lewis L. Hoy Collection

Pottsville Union Traction Company No. 56 setting in snow in Schuylkill Haven, Pennsylvania, in the 1920's.



## TRENTON, LAWRENCEVILLE, AND PRINCETON RAILROAD

### New Jersey

(New Jersey and Pennsylvania Traction Company, later Trenton-Princeton Traction Company)

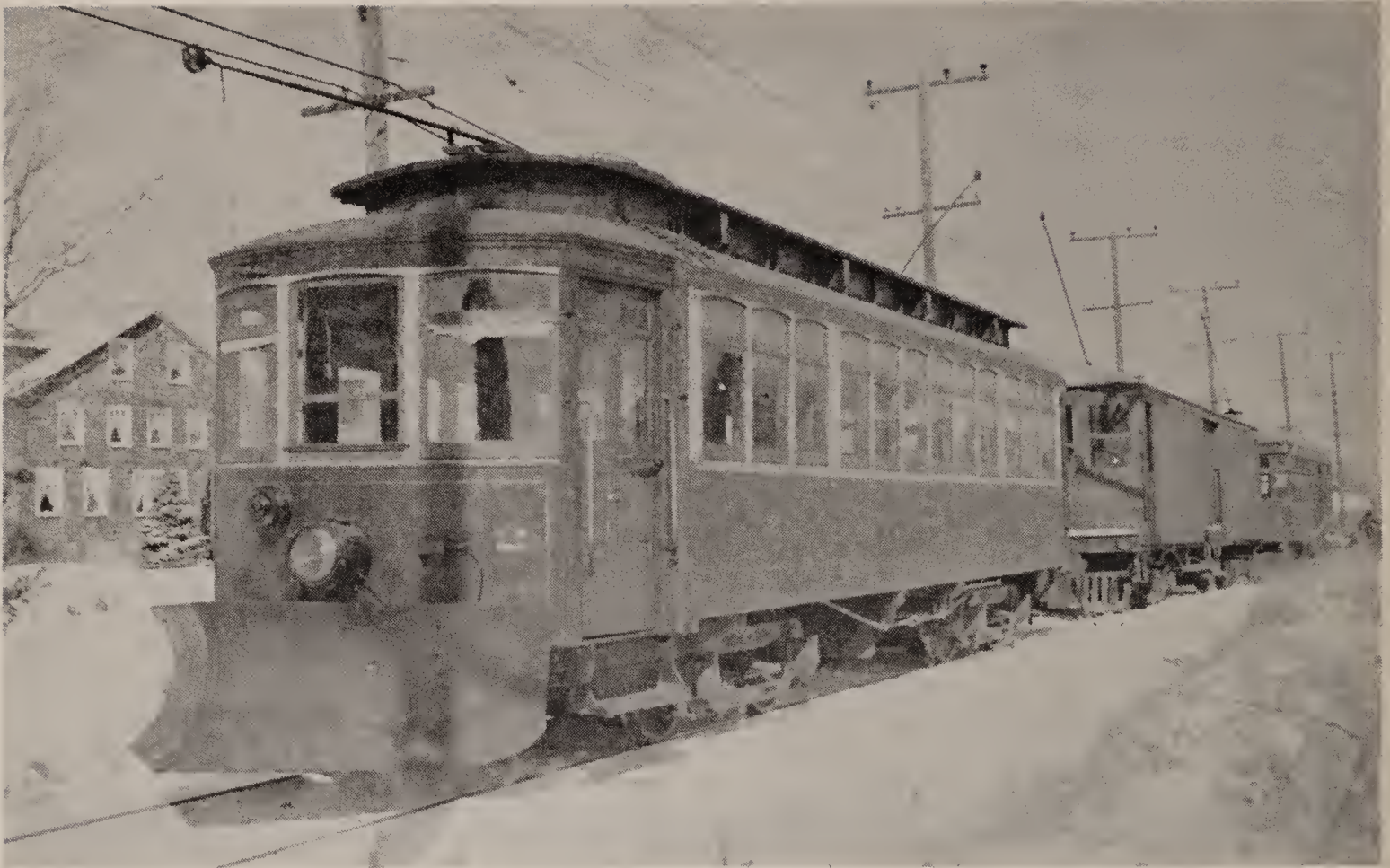
November 9, 1901, LVT Nos. 209  
210  
211

December, 1902, LVT No. 187

Trenton, Lawrenceville, and Princeton Railroad numbers not known although the cars retained LVT numbers for several months. New Jersey and Pennsylvania Traction Company offered ex-LVT cars Nos. 209, 210, and 211 for sale in 1908, but the disposition is not definitely known. They may have been sold to a system in Seattle, Washington.

The remaining car, Trenton-Princeton Traction Company No. 2, ex-LVT No. 187, was scrapped at Trenton, New Jersey, in late 1941.





Charles M. Johnson — James B. M. Johnson

Trenton-Princeton Traction Company utility car No. 2, former LVT No. 187, setting in line with a freight motor and center entrance passenger car on snow covered right of way at Lawrenceville, New Jersey, in March, 1936.



Charles M. Johnson — James B. M. Johnson

Trenton-Princeton Traction Company No. 2 passing center entrance cars Nos. 21 and 20 at Lawrenceville, New Jersey, in 1935.







